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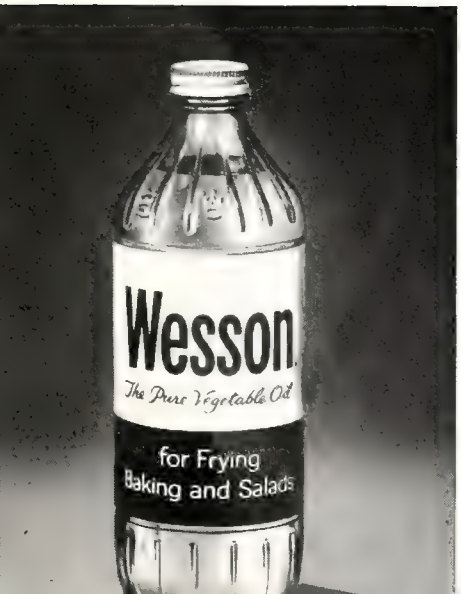
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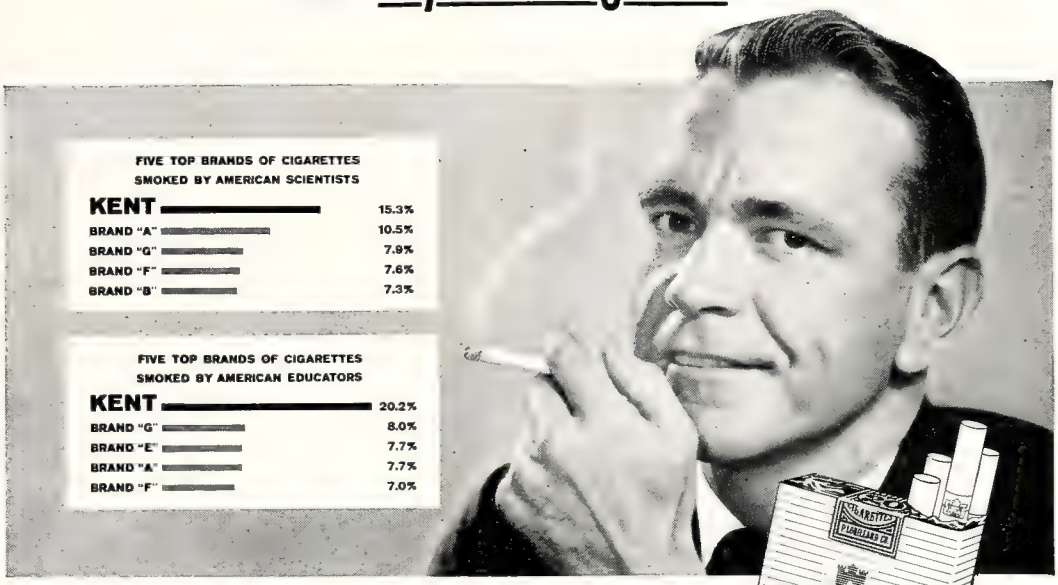
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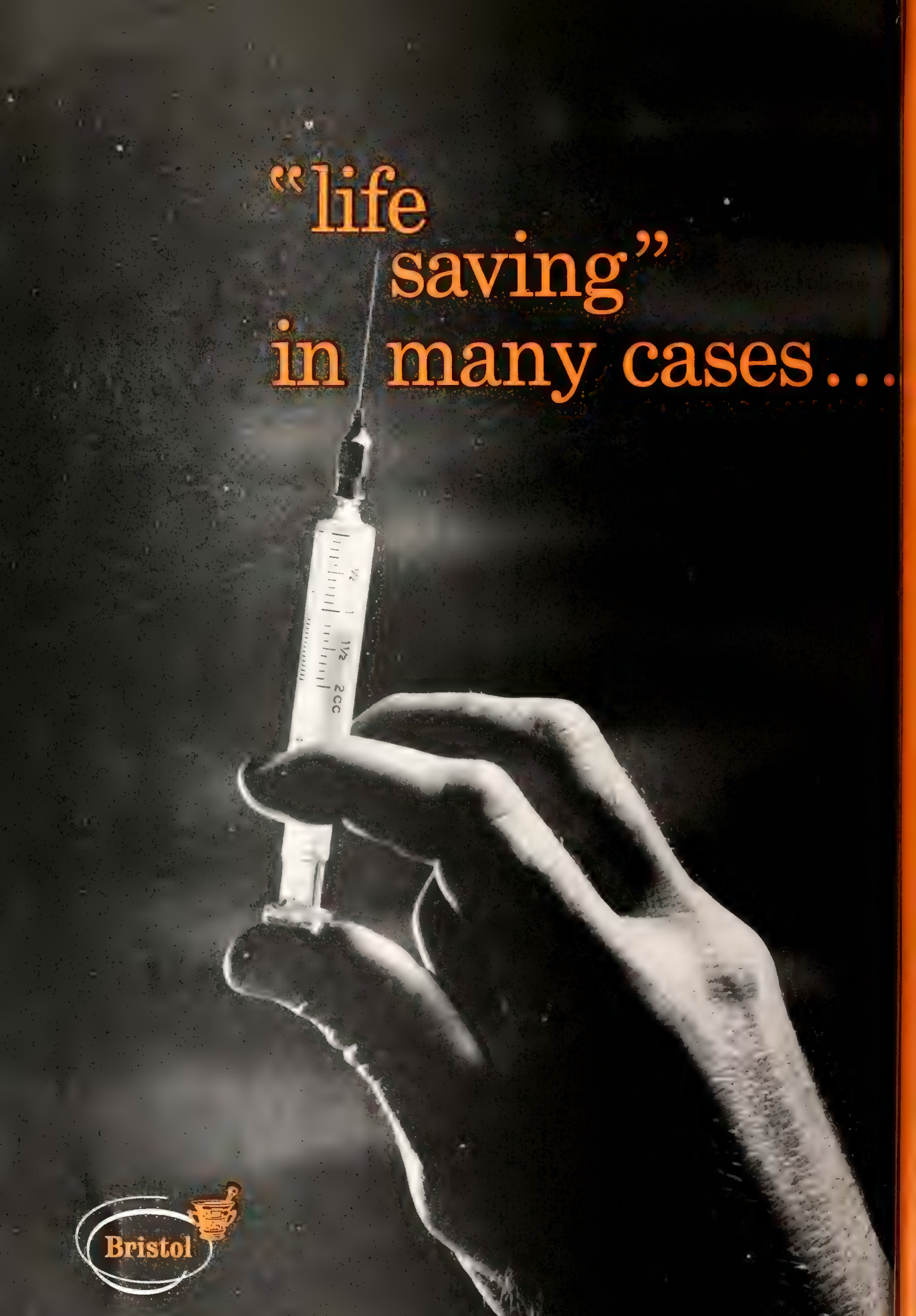
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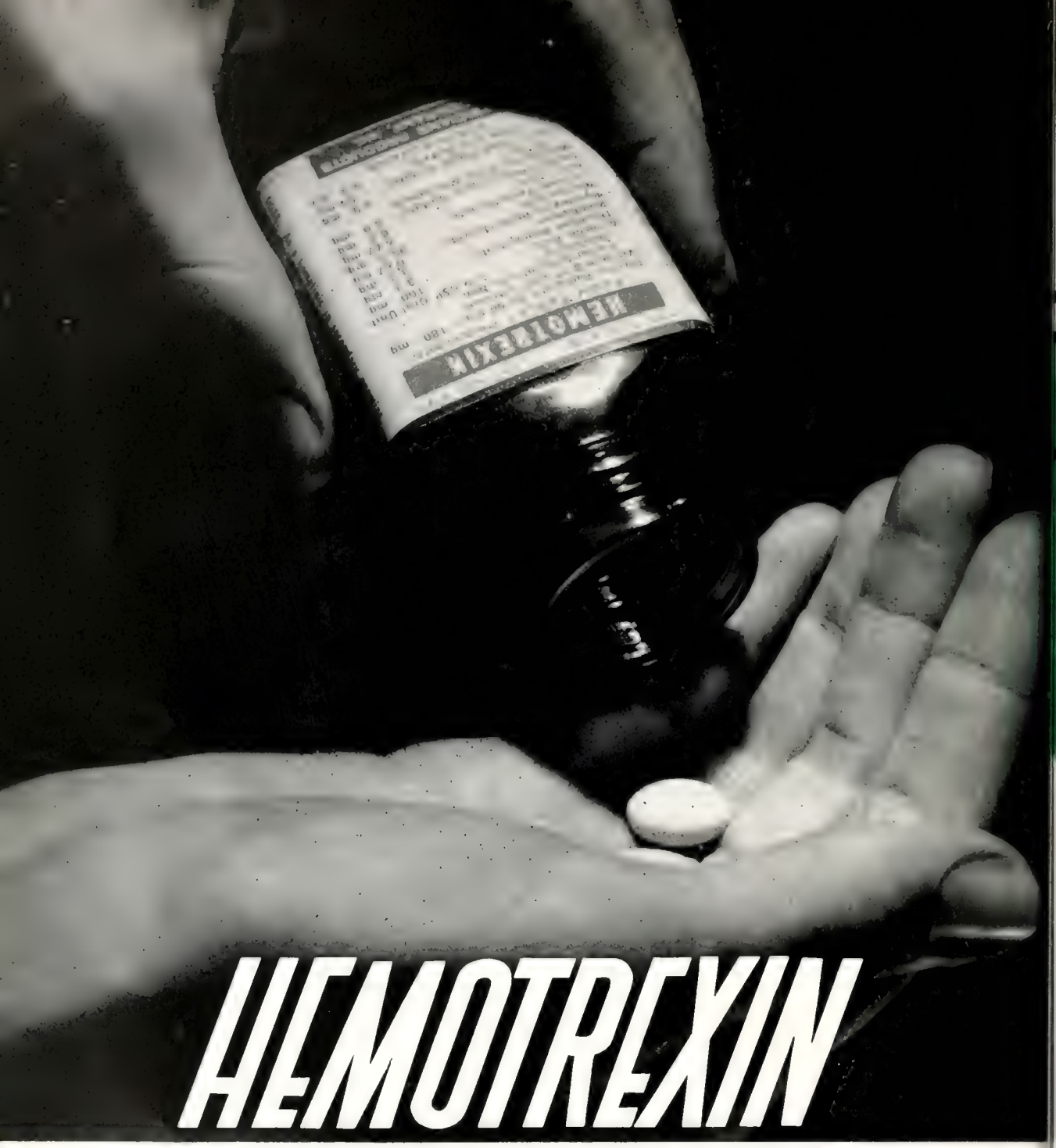
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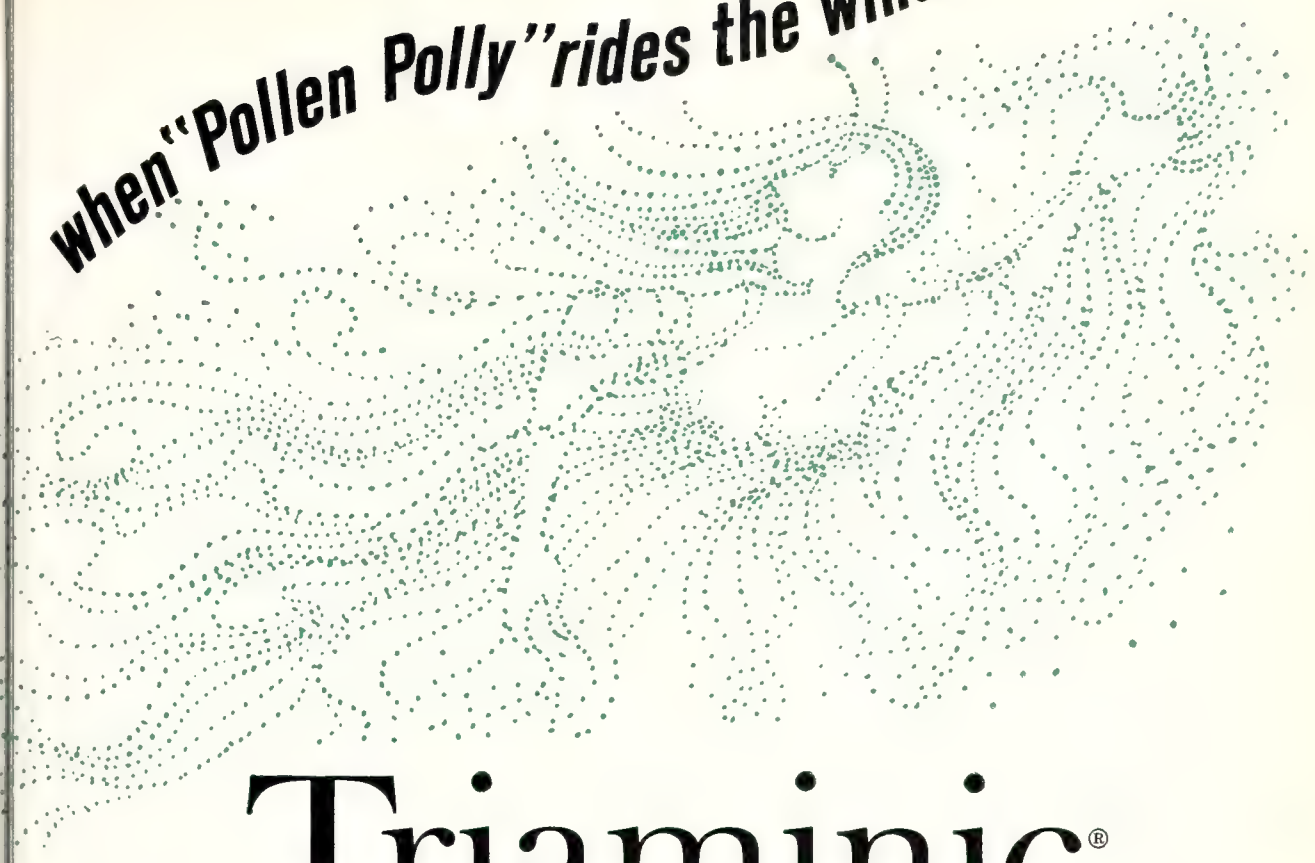
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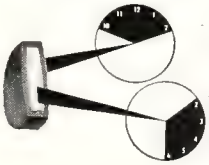
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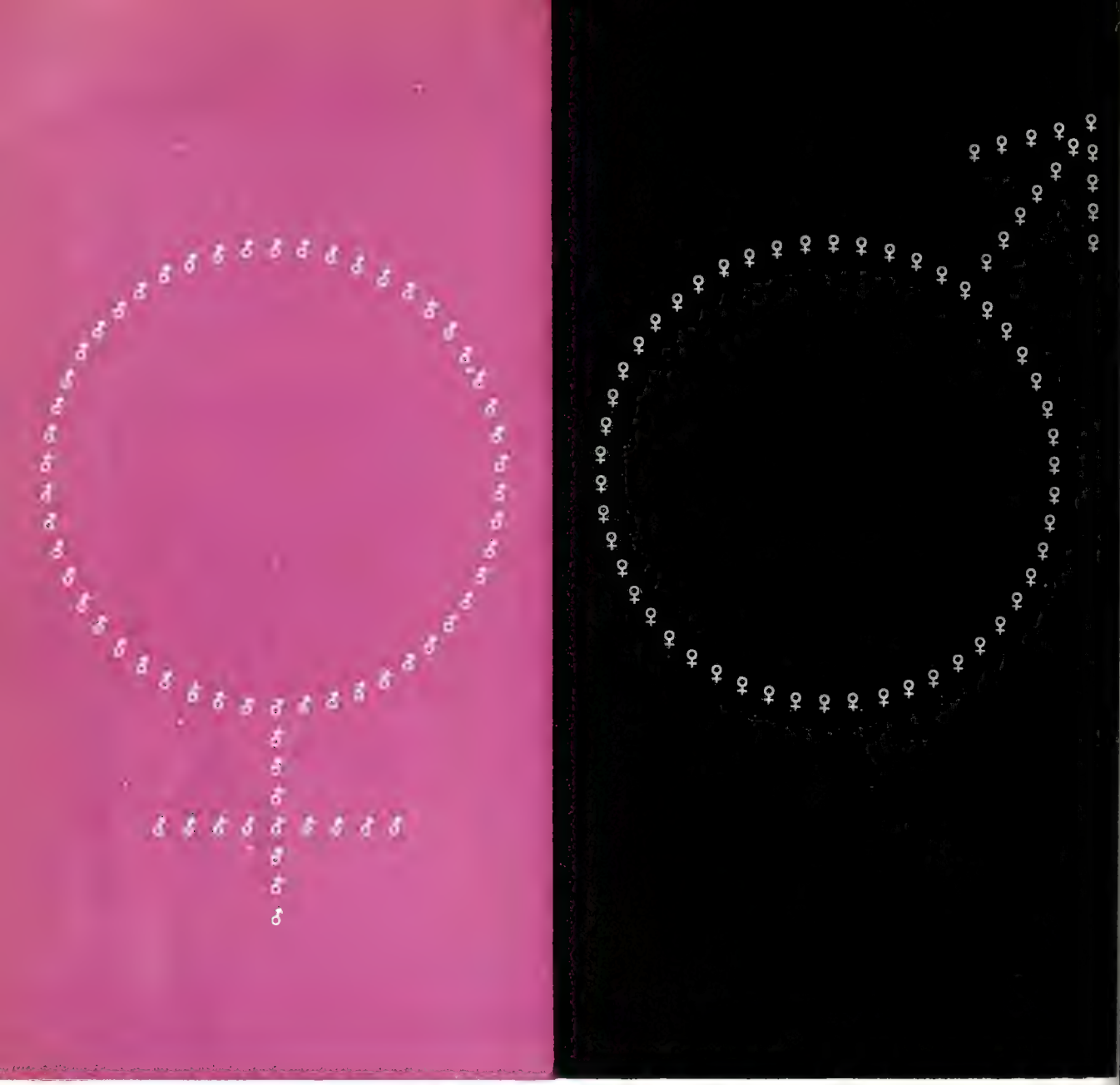
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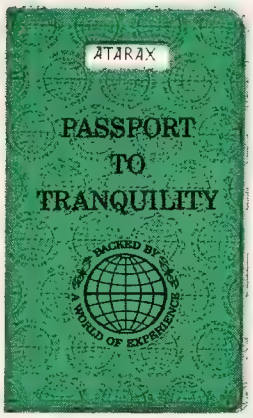
* Marmell, M., and Prigot, A.: Tetracycline phosphate complex in the treatment of acute gonococcal urethritis in men. Antibiotic Med. & Clin. Ther. 6:108 (Feb.) 1959.

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IN ELDERLY PATIENTS well tolerated by debilitated patients	"... seems to be the agent of choice in patients suffering from removal disorientation, confusion, conversion hysteria and other psychoneurotic conditions occurring in old age." Smigel, J. O., et al.: J. Am. Geriatrics Soc. **7**:61 (Jan.) 1959.	Settel, E.: Am. Pract. & Digest Treat. **8**:1584 (Oct.) 1957. Negri, F.: Minerva med. **48**:607 (Feb. 21) 1957. Shalowitz, M.: Geriatrics **11**:312 (July) 1956.
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IN HYPEREMOTIVE ADULTS does not impair mental acuity	"... especially well-suited for ambulatory neurotics who must work, drive a car, or operate machinery." Ayd, F. J., Jr.: New York J. Med. **57**:1742 (May 15) 1957.	Garber, R. C., Jr.: J. Florida M. A. **45**:549 (Nov.) 1958. Menger, H. C.: New York J. Med. **58**:1684 (May 15) 1958. Farah, L.: Internat. Rec. Med. **169**:379 (June) 1956.

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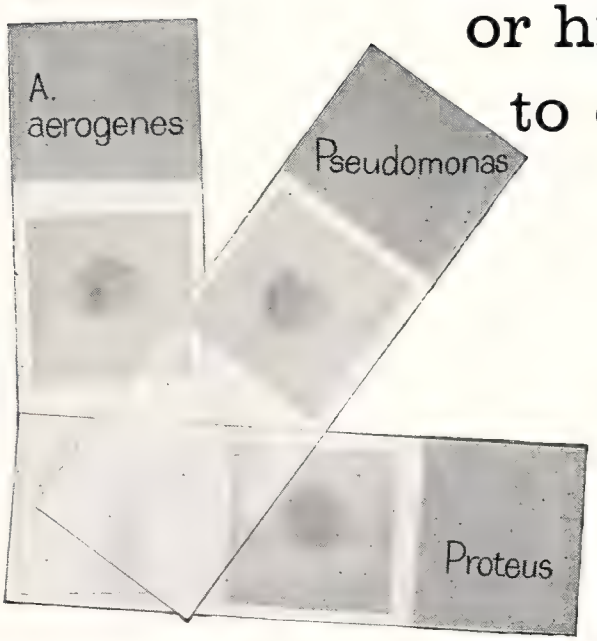
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1. Finland, M.; Hirsch, H. A., and Kunin, C. M.: Read at Seventh Annual Antibiotics Symposium, Washington, D. C., November 5, 1959. 2. Hirsch, H. A.; Kunin, C. M., and Finland, M.: **München. med. Wchnschr.** To be published. 3. Roberts, M. S.; Seneca, H., and Lattimer, J. K.: Read at Seventh Annual Antibiotics Symposium, Washington, D. C., November 5, 1959. 4. Vineyard, J. P.; Hogan, J., and Sanford, J. P.: **Ibid.**

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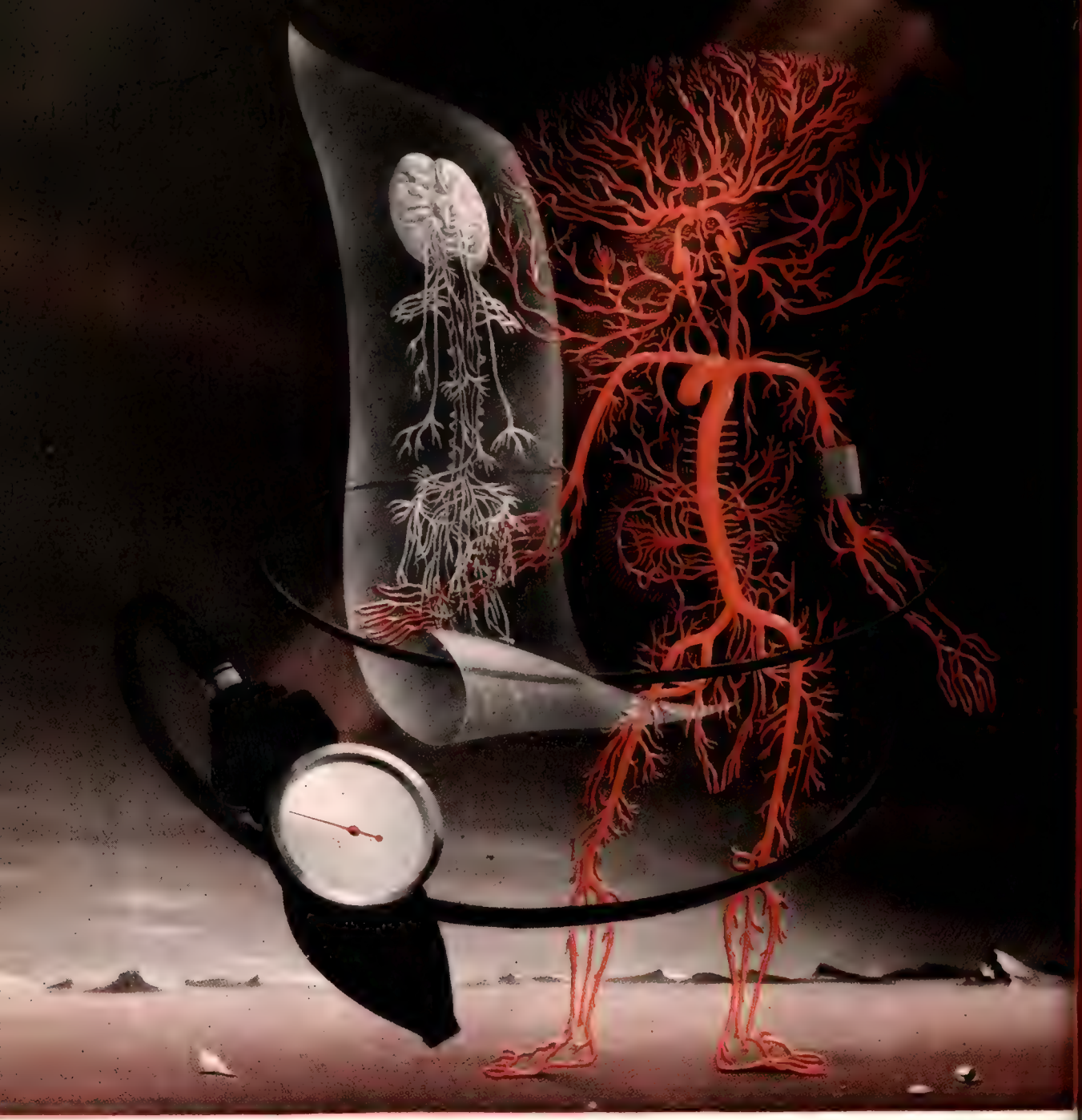
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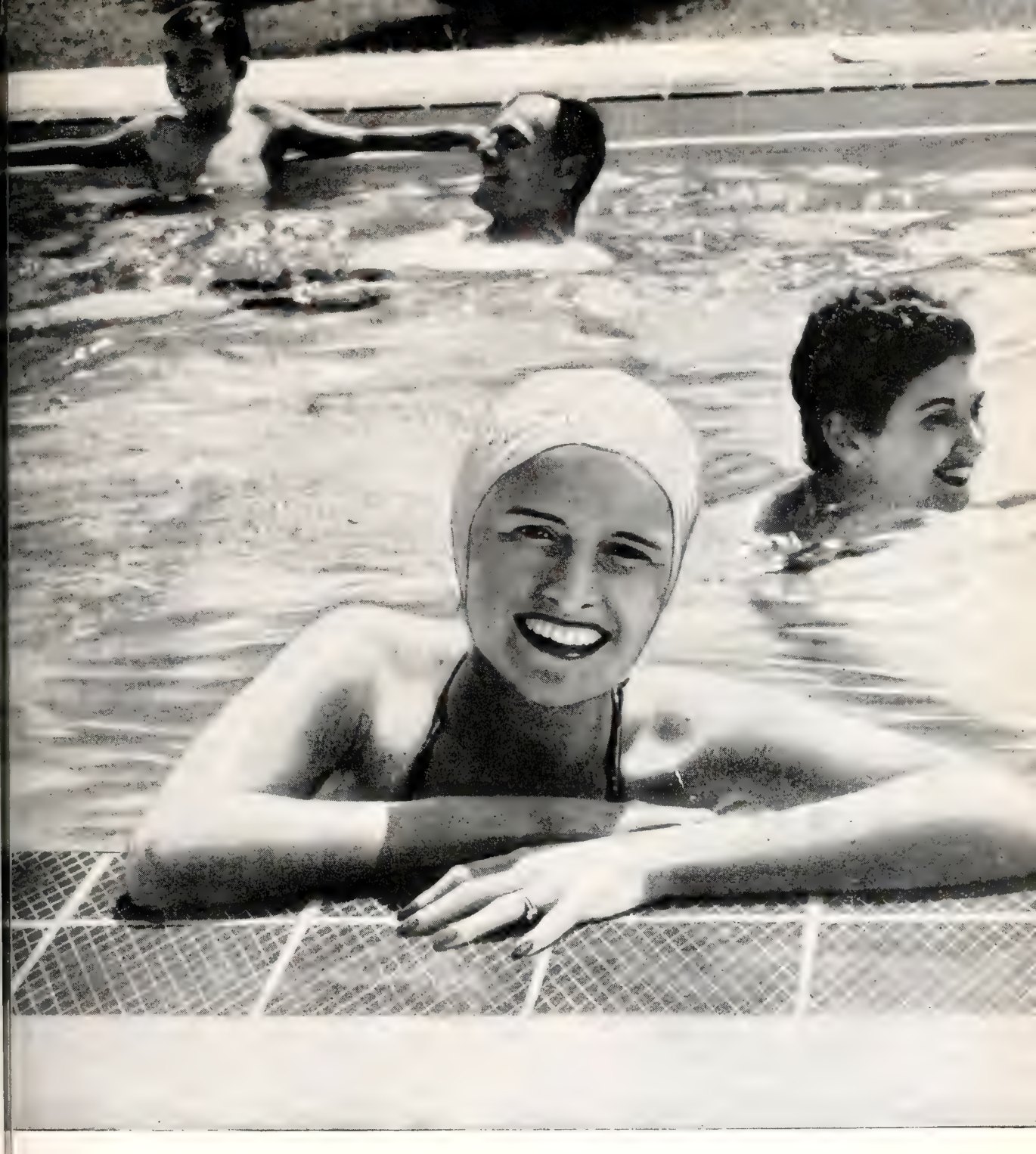
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VOLUME 21 JULY, 1960 NO. 7

President's Inaugural Address

AMOS N. JOHNSON, M.D.

GARLAND

I am grateful to you for having elected me to be your president. I repeat the words of Dr. Paul McCain on the occasion of his inauguration: "To have been selected and elected to leadership by those people who know you best, your fellow physicians, is the highest honor that can come to anyone"; and I am grateful for it. As I now assume this responsibility and honor, I am mindful of many things.

I am mindful of the constant and continuous change that is going on in this world and of the rapidity with which events move from day to day.

I am also mindful that there is a cancer eating at Medicine continuously—a social, a political, and an economic cancer that we must watch and attempt to eradicate. It is invading the profession from the periphery, from the heart, from the inside, from within Medicine itself.

I am mindful that when one person or one group loses its freedom, the freedom of all people is weakened; that abject and unreasoning conformity is the first symptom of mediocrity and eventual decay. Someone said that he who dares stick his head above the flowing tide of mediocrity is sure to have something thrown at him, but I say to you that it is only by continued, tireless effort to rise above the commonplace and to produce something of excellence that one attains success. Therefore I pledge to you that this year I will make every effort, with your help and the help of our capable staff in Raleigh, to keep the head of Medicine above the level of mediocrity, even though I may be fired upon. And, in the sniping at me, medicine may be jarred a bit, but we will engage our enemy and find his position and strength wherever he is recognized.

Read before the Second General Session, Medical Society of the State of North Carolina, Raleigh, May 11, 1960.

Legislative Issues

I must mention some of the issues which we will have to face this year. You have heard the discussions relative to legislation affecting medicine. In this day of government coddling minority groups, medicine is the whipping boy. Why? Because the politicians who run our country think that more votes can be gained by maligning us and making us the villains than by showering us with favors. So we are a unique minority who must be constantly alert to tell our story to all with whom we come in contact. Today's trend in Washington, as depicted on television, radio and the press, is for Government to be all things to all people, to give everything to everybody. That is why we must be diligent in making our cause known. We must educate and influence our politicians before they give away the privileges and financial security of all the people in this country.

Integration of Negro Physicians

Concerning the integration of Negro physicians into the Medical Society of the State of North Carolina, I have secured the original copy of the report filed by the committee appointed by President Zack Owens to study this problem. In brief, the report states that a thorough study and meeting of minds between this committee and empowered representatives of the Old North State Medical Society resulted in the conclusion that there was a difference in the social structure of the races which precluded integration at a social level, but that there was a need and a desire to make the scientific facilities of this Society available to physicians of the Negro race. A statement of agreement was then reached: a statement which gave these colored physicians every thing they asked and every thing they implied they needed. They were given access to the American Medical As-

sociation and national specialty boards through scientific membership in our State Society; access to the North Carolina examining and licensing board by the privilege of nominating candidates and voting in these elections.

After all this, we have two scientific members. Every Negro doctor in North Carolina could belong to our Society and could be sitting there with you today; however, of this privilege only two have availed themselves, and neither of them have I ever seen at a scientific session. After the original agreement was reached, their attitude quickly changed, probably touched by an outside influence persuasive enough to make them decide that they didn't get what they really wanted the first time. Now, after a short four or five years, they come back and want full membership.

I say to you that it is not we, the members of the Medical Society of the State of North Carolina, who will bear the onus of what will happen as a result of the unpleasantness that is sure to come. We have not broken the faith; they, the members of the Old North State Medical Society, have broken the faith under the pressure and duress of the NAACP, whose sole purpose is to foment trouble, unrest and disorder.

That brings us up to the point at hand. You take my word that what I have told you is true, that we went the full distance, the last mile. They want to dance with us, they want to sit at our banquet tables, they want to associate with us socially. Now, maybe it is all right for them to want that. I cannot judge, since I cannot put myself in their position. My perspective must necessarily be purely objective. But when I go back and think of what is basically right and on what grounds they have to demand this, I think of other creatures of nature. The tiger doesn't consort with the lion when sundown comes. Each goes to his own den. The fox doesn't knock on the kennel door to lie down with the hound, though they are closely related. The duck and swan do not fly North together. I do not know that there is any sociologic or biologic law that says we must integrate two elements of our society that are presently as separate and diverse as are these two races.

We now have the problem of what to do. First, I propose to reactivate and enlarge the committee appointed by Dr. Owens. I propose to strengthen it, to confer with it and ask it then to study and recommend what we can do as a Society to meet this situation. It occurs to me that we can do two things: We can stand our ground, for I cannot see that we have erred. We can say to our Negro physicians: "You can have scientific membership. That entitles you to participate, nominate, and vote. That entitles you to all privileges except social functions." Or, we can do as other groups have done. We can leave this organization, the Medical Society of the State of North Carolina, exactly as it is now and, without change of constitution or by-laws, omit all social functions. We can then, by whatever maneuver is necessary, make membership in the Society tie in with license to practice medicine in North Carolina and require membership and regular attendance at meetings. Then we can be assured of having our brethren with us for scientific sessions. If we desire to have social functions, and no doubt we will, this can be accomplished by invitation only under the auspice of some other organization.

Other Considerations

There are other things of which I am mindful. The format of our Annual Meeting will be changed, as authorized by the House of Delegates. We will hold perhaps three general sessions in the mornings, with a program which would have continuity of a sort involving the areas of the specialty sections. It would be a broad-spectrum program, and participating in it would be surgeons, internists, pathologists, radiologists, and others.

If time permitted, I would discuss with you in some detail other matters of interest. However, I will briefly mention one or two of most interest.

Dr. Wilburt Davison, who is soon to retire as Dean of the Duke University School of Medicine, is proposing a change in the accepted plan for the first year internship in North Carolina. This plan would set up an acceptable teaching and training program in our better community general hospitals. Each of our three medical schools would, by agreement, discontinue their one year of internship and run only a residency



AMOS N. JOHNSON, M.D.

training program. This change would channel, for one year at least, young doctors through hospitals whose major purpose is to treat and alleviate disease and suffering. This could give these young men a better perspective upon which to decide their future interest and training as physicians. Much work, salesmanship, and persuasion will be required if this excellent idea is ever put into practice.

Dr. Wingate Johnson, editor of your NORTH CAROLINA MEDICAL JOURNAL, has assured me that I will be given a page in every issue of our JOURNAL this year. I promise you that I will use this page in each issue to keep you abreast of problems and progress of our Medical Society as I see them. Some ideas and proposed innovations may be controversial; however, their purpose will be to escape from conformity and mediocrity. I will at all times welcome comments and ideas from all our membership.

Again I am grateful to you for permitting me the honor of appearing before you.

Bad Politics and Good Medicine Don't Mix

LOUIS M. ORR, M.D.

ORLANDO, FLORIDA

It was with a certain amount of sorrow that I read in the newspapers recently that Congressman Aime Forand will retire from Congress at the end of his present term for reasons of health. As a newspaper report of the story said: "His doctors wanted him to quit two years ago." Of course, all of us hate to see Mr. Forand go. But on the other hand, as physicians, we are obliged to regret that he did not follow his doctors' advice two years ago.

Unfortunately, the legislation that has become identified with Mr. Forand will not be retired with him. We know that other bills providing health insurance for the elderly—financed through Social Security—will be around Congress for some time to come. There seems to be a general belief among the pseudo-philanthropists in Washington that the only way to help the aged meet their medical and hospital bills is to soak the rest of the population by raising the Social Security taxes. This belief seems to be so untouchable that it is now an unofficial creed of some politicians, and anyone who does not subscribe to it is branded as inhuman and callous.

As you know, many different bills have been introduced in both houses of Congress in recent months to provide some form of help to the elderly. Those measures which would saddle the taxpayer and wage-earner with the bill are enthusiastically hailed by Forand supporters.

From the midst of all the politicking and pompous oratory surrounding such measures, one crude fact emerges: Health care for the aged has become a political issue, and it will be used to campaign for votes in the fall. Personally, I regard this as a wretched example of political expediency. It has been obvious for several months that, in the absence of any strong issues, the coming national elections might be rather dull this year. Consequently, the question of health care for the aged has been seized upon as a seemingly clear-cut issue . . . something to get emotional about . . . something to win votes with.

In the course of all this, physicians in general and the American Medical Association in particular have been villified for not endorsing these measures. Because we oppose the Forand bill and similar measures, we are called heartless scoundrels. It is implied that we are fighting tooth-and-nail to keep the nation's elderly in a condition of abject poverty, without medical care.

Of course this is nonsense. There is no doubt that we have opposed Forand-type legislation. However, we have never said we opposed helping the aged meet their medical and health expenses. While we are very willing to consider reasonable proposals which would result in actually helping the aged, we can see no reason why the government must pick the pockets of the younger generation to pay for the health care of the old people. I make the point of

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our willingness to consider sound measures because it will clarify what I plan to say in a few minutes.

This entire question of government medicine is a radical departure from the traditions which raised the United States to such greatness. Throughout history our nation has championed the voluntary approach to health and medical care. Our physicians have functioned on an unrestricted, private basis, either as solo practitioners or in a group of doctors forming a clinic or group practice. We always have spurned any form of national compulsory health care.

In recent years, however, our federal government has been taking an increased interest in health and medical matters. This interest has manifested itself along lines we are convinced would be dangerous for the health of the nation. For example, just since 1953 a total of 2,194 health and medical bills have been introduced in Congress. This total does not include those that already have been introduced and will be offered in the second session of the present Congress.

Veterans' Medical Care Program

I could list any number of examples of the growing interest of Congress in health matters, but let us start with the veterans' medical care program in the United States. Let us take a quick look at what has happened.

The original motive for this program was the desire to provide care for any veteran who had become *disabled while serving his country*. Such a desire was, and still is, a sound, humanitarian motive and a legitimate obligation of the federal government. Over the last 35 years, however, the program has been expanded to provide care for the veteran who suffers a disability *after* his discharge from service and one that has no relation to his military duty. The reasons for this expansion can be traced to politically motivated acts of our Congress, as well as to vigorous pressure by lobbying organizations.

In 1917 legislation was first passed to provide medical services and supplies to veterans with *service-connected* disabilities. Six years later Congress broke the ice and authorized care for *non-service-connected* cases, because some beds had become available through a reduction in the load of patients with service-connected conditions. This provision applied only to certain veterans.

A year later, the doors were opened wider to include more veterans. Within two years (1926) 17 per cent of all patients in veterans hospitals were receiving treatment for diseases or injuries not related to military service. And in that year the doors to the veterans hospitals were swung completely open.

Two years later (by 1928) 49 per cent of all admissions were for non-service-connected cases. By 1931 this figure had jumped to 71 per cent. In 1954 more than 83 per cent of the patients discharged from veterans hospitals had disabilities not connected with military service.

During the last 30 years the argument for care for non-service-connected cases has been that as long as extra or vacant beds are available, the beds should be used for *indigent* veterans who have non-service-connected disabilities or illnesses. Well, 30 years ago our nation had only 9,500 "extra" beds. Today there are more than 80,000.

The VA costs have skyrocketed from 37 million dollars in 1934 to 843 million dollars in 1959. Perhaps even more important than the cost of this particular federal program, however, is the development of greater federal control of our medical schools as the private teaching hospitals drop internships and residencies because of inability to compete with the VA hospital inducements. And these are paid for by our tax dollars. I fear that federal programs such as this can lead to a large number of physicians whose total hospital experience during their education will have been under the federal eye—from clinical clerkship to completion of residency.

There are many, many more problems connected with the veterans program, but to examine each would take considerable time. From this brief discussion, however, you get some idea of the error in allowing the federal government to expand a *legitimate* program until it "covers the waterfront."

Health Plans and Social Security

As I mentioned earlier, one of our major reasons for opposing Congressional health

schemes is because they would be operated under the Social Security Administration.

When the Social Security Act became law in 1935, it contained 15 titles covering a wide range of subjects, including old age "insurance," aid to the blind, aid to dependent and crippled children, aid to the needy aged, grants for maternal and child welfare, and unemployment compensation.

The A.M.A. has not taken any position before or since 1935 about the wisdom or desirability of the over-all Social Security program. In fact, the act might never have become a matter of concern to the medical profession had it remained in or near its original form.

The act was amended drastically in 1939, particularly in regard to Title II, which covered old age insurance programs. Few substantial changes were made between 1939 and 1950. Since then, however, the act has been amended substantially in every election year—1952, 1954, 1956, and 1958.

The original provisions of Title II were designed to compel the employed worker to set aside a certain amount of his earnings for his old age. It applied primarily to workers in commerce and industry. The act did not and was not intended to cover self-employed persons, farmers or professional people, among others.

Title II was originally limited to lump sum death benefits and monthly old age payments for covered employes who had paid into the system. Four years after adoption, the act was amended radically to allow monthly benefits for dependents and survivors.

In 1950 some 10 million workers were brought under the protective wings of the Social Security Act, and in 1954 coverage was forced on farmers, lawyers, dentists, and additional farm and domestic employes. State and local government employes, ministers, and members of religious orders were offered a means to accept coverage voluntarily.

The only large groups not now covered by the act are federal government employes—who have their own retirement program—and physicians.

The A.M.A. has opposed inclusion of physicians for philosophic and economic reasons. Our philosophic arguments are based on the theory, history and long-range prospects for social insurance systems. In other countries, such schemes have grown from retirement payments to survivorship payments to temporary cash sick benefits, and finally to national compulsory health insurance.

In the United States, Social Security is following the same pattern. It has progressed farther and farther away from its original purpose of providing financial protection for aged citizens and has moved closer and closer to the paternalistic, government concept of "womb-to-tomb" coverage.

Economically, few physicians would benefit from the retirement features of Social Security since most doctors continue working long after their sixty-fifth birthdays. We in the A.M.A. also feel that our approval of compulsory coverage would tend to dilute the strength of our continuing struggle against government medicine via amendments to the Social Security Act. It is well known that advocates of federal medicine have long envisioned the act as a vehicle for providing all-embracing government health care. This ultimate objective was openly presented to Congress in 1943 when a national health insurance bill was introduced. Although it was not passed, versions of this 1943 legislation have been presented in every Congress since then.

From 1948 to 1951 the bills received their greatest attention. It took a long and active campaign against this type of legislation by the medical profession and numerous other groups to convince Congress that Americans wanted no part of government medicine.

Government Medicine vs. Voluntary Insurance

In our country, the government's medical activities are on a massive scale, and they continue to grow. Last year for all health programs—research, medical care, public health—the government spent 62 per cent more than it did five years before. Programs in 22 separate agencies and departments of the U. S. government range from cancer research to federal employee clinics. The total cost last year was about 2 3/4 billion dollars.

Today nearly 38 million persons are eligible to receive all or part of their medical care from or through the federal government. Both as a physician and as a taxpayer, I would like to know where this is going to stop!

In our country, nearly 125 million persons have some form of voluntary, non-government health insurance. This is about five out of every seven persons. And more and more persons are signing up for such health insurance coverage.

So you see, this coin has two sides—on one side the federal government is expanding its activities in the medical care field, while on the other voluntary methods are providing more and better non-government health insurance for Americans.

The American Medical Association believes the voluntary system should be allowed to function freely and to provide for the health care needs of the American people. Our opponents sit back and whine: "Let the government do it."

The medical profession, along with its many allies in the health field, is trying to halt the current piecemeal attempts to bring complete federal control of medical care and the medical profession. Already our opponents have made far too many gains, and the struggle has become a "do or die" fight to keep the private practice of medicine alive in the United States.

Conclusion

This, then, is the situation. I can promise you the A.M.A. will do all in its power to maintain the free enterprise system, the private practice system, and the voluntary approach to health and medical care. We will do so because these methods have brought to the American people the highest possible degree of medical care and knowledge, and it will bring them even greater care in the future.

Three Great Challenges

LEONARD W. LARSON, M.D.*
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As you know, American medicine is entering into a decade that may be its greatest—or its most disastrous. I am sure you are well aware of the innumerable challenges and problems that lie ahead of us, many requiring our immediate attention. I want to speak about three of these challenges.

Medical Education

One which requires careful study and the positive approach is the task of improving both the *quality* and the *quantity* of our medical education facilities. Here, we must plan ahead to maintain an adequate supply of well trained physicians to meet the future medical needs of the American people.

For the past 30 years or more, the production of new physicians by our medical schools has kept up with the nation's growing population. Times are changing, however, and we cannot be complacent. Our population is increasing. Medical knowledge is expanding. Medical services are becoming more complex. And the American people are showing greater interest in both the quality and availability of health services.

In recent years there have been a number of governmental and private studies involving the nation's future needs in medical manpower. These studies have predicted approximately the numbers of physicians and medical schools required by 1975 and thereafter. Opinions differ on the variety of statistics and estimates, but there is agreement on the need for constructive planning to meet future requirements. Undoubtedly, it will be necessary to increase the annual number of medical school graduates.

In December, 1958, the A.M.A. House of Delegates adopted a statement on the expansion of American medical education. *Existing* medical schools were urged to consider increasing their enrollments and developing new facilities. The House also encouraged the creation of *new* four-year

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medical schools and two-year basic science programs by universities which can provide the proper academic and clinical setting. This expansion, the House emphasized, should be based upon careful, continuing study of the changing needs in all categories of medical activity.

In addition, the American Medical Association is encouraging medical schools to experiment in new programs aimed at bringing about continual improvement in the quality and content of their curricula. For example, the new medical school standards approved in June, 1957, are intended to provide flexible guides which will discourage excessive concern with standarization, but which also will stimulate each medical faculty to provide a well integrated educational program in accordance with its own particular setting.

Recruitment

Meanwhile, the A.M.A. has developed an expanded career guidance program to recruit qualified, dedicated young people into the study of medicine. There is definite need for more intensive effort along these lines—from the national level all the way down to the grass roots of the doctor's home town or neighborhood.

Too many superior students are attracted by other sciences which, in this age of electronics, nuclear energy and space exploration, may seem more exciting or glamorous. Others are drawn to careers which may appear to be more lucrative or more easily attained, or less demanding. Many of these young people are discouraged by the length and cost of a medical education.

Recruitment and expansion in medical education are, of course, closely related problems. Recognizing this at the Dallas meeting last December, the A.M.A. House of Delegates approved the creation of a special committee to "present a scholarship program, its development, administration and the role of the American Medical Association in fulfilling it." Such a program also could include provision for student loans.

The same committee will study these seven other major questions:

—How far can medical schools expand their student bodies while still maintaining a high quality of medical education?

—What universities can support new medical schools with qualified students and sufficient clinical material for teaching—either on a two-year or a full four-year basis?

—How to obtain competent medical faculties?

—How to finance the expansion and establishment of medical schools?

—How to finance medical education in the most economical ways commensurate with high quality training?

—How to recruit well qualified students into the study of medicine . . . and, finally,

—What are the possibilities of relaxing some of the geographic restrictions which affect the admission of medical school students?

This new committee was asked to make its first report at the A.M.A. June meeting.

I urge you and the entire profession—practicing physicians, teachers, administrators, researchers, medical societies, public health personnel, and medical schools—to give full cooperation to this study. Through all possible channels I hope that you will make your ideas and suggestions available for this long-range project aimed at the continuing improvement of American medical services.

Third Parties

Still another challenge to all of us is the task of bringing about better understanding and cooperation between medicine and the various third parties involved in medical care plans and health insurance.

You may recall that last June the A.M.A. House of Delegates, in acting upon the recommendations of the Commission on Medical Care Plans, adopted these key statements on freedom of choice of physician:

> The American Medical Association believes that free choice of physician is the right of every individual and one which he should be free to exercise as he chooses.
>
> Each individual should be accorded the privilege to select and change his physician at will or to select his preferred system of medical care, and the American Medical Association vigorously supports the right of the individual to choose between these alternatives.

Those statements were *reaffirmed* at the Dallas meeting last December. Some members of the profession felt, however, that there had been a certain degree of misunderstanding or misinterpretation of the

action taken last June. Therefore, at the Dallas meeting, in order to clarify and strengthen its position on the issue of freedom choice, the House also adopted this additional statement:

> Lest there be any misinterpretation, we state unequivocally that the American Medical Association firmly subscribes to freedom of choice of physician and free competition among physicians as being prerequisites to optimal medical care. The benefits of any system which provides medical care must be judged on the degree to which it allows of, or abridges, such freedom of choice and such competition.

In other words, the medical profession recognizes a person's right to choose the kind of medical care plan he wants—including a closed panel plan. At the same time we believe emphatically that the *best* medical care comes about when the patient has maximum freedom of choice and the doctor has maximum freedom of professional action. I think, however, that all of us must do a much better job of explaining to the public, and to those who sponsor medical care or health insurance programs, just why these principles are vital to high quality medical service.

I urge you to cooperate sincerely in all national, state and local activities aimed at bringing about better understanding. In my opinion, all of us should bear in mind that labor unions, industry, and other third parties in the medical care field are trying to meet a need under our American system of private enterprise. It seems to me that *all* of us—*despite differences of opinion on certain points*—should be working together in the fight against a common danger: government encroachment which ultimately could destroy our *entire system* of private medicine and voluntary health insurance.

Physician-Hospital Relationships

Another difficult issue which concerns the entire medical profession is the problem of physician-hospital relationships. I would not attempt to cover all the complexities and variations of this subject, but again I *would* like to report to you on the latest policy developments in this area.

1951 Guides for Conduct

The A.M.A. House of Delegates, at the Dallas meeting received a dozen resolutions on the subject of physician-hospital relationships. The House did not act upon any of those resolutions. Instead, to remove any doubt about its position, the House *reaffirmed* the 1951 "Guides for Conduct of Physicians in Relationships with Institutions." It also declared that "all subsequent or inconsistent actions are considered superceded."

If I may, I should like to refresh your memories by quoting just three brief paragraphs of those 1951 guides. They summarize general principles which should be used as a basis for adjusting controversies. Again I quote:

> 1. A physician should not dispose of his professional attainments or services to any hospital, corporation or lay body by whatever name called or however organized under terms or conditions which permit the sale of the services of that physician by such agency for a fee.
>
> 2. Where a hospital is not selling the services of a physician, the financial arrangement if any between the hospital and the physician properly may be placed on any mutually satisfactory basis. This refers to the remuneration of a physician for teaching or research or charitable services or the like. Corporations or other lay bodies properly may provide such services and employ or otherwise engage doctors for those purposes.
>
> 3. The practice of anesthesiology, pathology, physical medicine and radiology are an integral part of the practice of medicine in the same category as the practice of surgery, internal medicine or any other designated field of medicine."

In addition to reaffirming the 1951 guides, the A.M.A. House of Delegates recommended that the medical profession strengthen relationships with hospitals by action at *state and local levels*. And, finally, it also urged the A.M.A. Board of Trustees to continue to maintain liaison with the American Hospital Association's Board of Trustees.

This is a highly complex issue with legal and professional ramifications which vary greatly in different states and communities. In my own view, our best hope for sound, lasting solutions would be in developing effective liaison between physicians and hospitals at the state and local levels.

Both of us—physicians and hospitals—must think primarily of public welfare and community responsibility. At the same time, we doctors have a duty to protect those ethics and traditions which contri-

bute to high quality medical care, and which safeguard the patient against all possible kinds of exploitation.

I hope that physicians everywhere will work especially hard to help bring about better communication and understanding on the state and local level.

Conclusion

Among the many challenges facing medicine, I have outlined but three—expansion of our medical education system, relationships with third parties, and physician-hospital relations.

I am confident that my fellow physicians in North Carolina will measure up to these long, hard tasks ahead.

Generalized Salivary Gland Virus Disease In Post-neonatal Life

CHARLES F. GILBERT, M.D.
CHAPEL HILL

The clinical and pathologic features of generalized salivary gland virus disease in the newborn and adult are well known. It is not so well known that the disease has a post-neonatal phase in which the clinical and pathologic features have not been well defined. This hiatus in knowledge is due in part to the rarity with which the disease occurs in this age group. The following case is reported to emphasize some features of the post-neonatal phase of the disease and to indicate certain diagnostic methods which have been recently described.

Neonatal Form

The disease in the neonatal age group has two distinct forms. The first is asymptomatic involvement of the salivary glands, which is found in 10 to 30 per cent of unselected autopsies. The second is the disseminated form, which presents a characteristic clinical picture and has an especially high incidence in premature infants. The characteristic findings are jaundice, hepatosplenomegaly, cutaneous petechiae, anemia and thrombocytopenia, which are present at birth or develop within the next few days. The virus is pantropic, involving the kidneys, liver and lungs more commonly, but frequently is present in the brain, pancreas, thyroid, gut or other organs. The mode of dissemination is thought to be transplacental, occurring early in the gestation. The mechanism liberating the virus from the mother's salivary glands and causing the maternal and fetal viremia is unknown. An interesting feature is that the fetal organs receiving a large amount of blood are involved more frequently and more extensively. The prognosis in the disseminated disease is grave in contrast to that in the localized or asymptomatic forms.

Adult Form

Disseminated salivary gland virus disease is extremely uncommon in adults, only 35 cases having been published in the world literature[1]. The disease has been reported only as a complication of a chronic debilitating disease or its treatment. A primary neoplasm of the reticuloendothelial system, refractory anemia, leukemia, renal disease, and other less common debilitating diseases have been associated with a majority of reported cases. The symptoms of the adult form are those of the primary disease and of respiratory distress secondary to an interstitial pneumonia caused by the salivary gland virus. The pneumonia in many cases, both adult and neonatal, is associated with an infestation by *Pneumocystis carinii*. This latter organism is thought to be a protozoan, but its classification is uncertain. It is associated with salivary gland virus disease in up to 50 per cent of cases.

Post-neonatal Form

The disease in this age group differs somewhat from that of the newborn and the adult. It usually presents as a severe respiratory infection or gastroenteritis. Renal and hepatic dysfunction occur, but are less common. The disease is usually manifest between 2 and 4 months of age,

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but has a range of 3 weeks to 32 months[2]. Prematurity has not been correlated with the development of the disease. As in the neonatal group, there has been, to date, an unrelenting progression of symptoms until death, which may be as long as two or three months.

The organ involvement in this age group is similar to that of the newborn. The lungs, kidneys, and liver are commonly affected, and other organs less frequently. As in the present case, the clinical picture is not well defined, but the disease should be suspected in children with an unremitting pneumonia or gastrointestinal disturbance, especially if hepatosplenomegaly accompanies either.

Development of the fulminant disease in newborn infants is apparently related to the fetal viremia and the inability of the infant to produce antibodies. The same factors may be present in adults with a chronic debilitating disease. Most cases in the post-neonatal period apparently have no precipitating illness.

Case Report

The patient was a 12 month old white girl referred to North Carolina Memorial Hospital because of stiffness and weakness of the right arm and leg observed since the age of 3 months. There had also been failure to attain normal muscular development and skill.

The child was the product of a normal pregnancy, but during the nine-hour labor arrest occurred, and she was delivered with low forceps. She cried spontaneously and her color was good. The mother and father were healthy and had no other children.

On the first clinic visit, at 12 months of age, she weighed 21½ pounds and was 30½ inches in length. The head circumference was 16 1/4 inches, slightly below the third percentile for her age. The right elbow and knee were flexed, and spasticity was present in these limbs. The right leg was ½ inch shorter than the left, but mobility at the hip joints was normal. There was a possible homonymous hemianopsia on the right. An electroencephalogram had evidence of left cerebral damage.

The patient returned at 14 months of age because of seizures characterized by sudden dropping forward from a sitting position, turning of the head toward the left, and clonic motions of the left leg. These lasted about 30 seconds. Occasionally vomiting followed. The seizures had begun 12 days prior to this visit, and occurred about five times a day for the first five days, and thereafter about every half hour. The family physician had prescribed phenobarbital, following which the seizures became less frequent. The physical findings were unchanged. Because the seizures had continued to occur, the dosage of phenobarbital was increased and Dilantin was also prescribed.

She was admitted to this hospital at 15½ months of age because of an "urticarial-like" rash and fever which had been present for the previous 11 days. The rash had begun over the neck and upper trunk and finally spread over most of the body. Dilantin was discontinued four days after the rash developed. About three days before admission her throat became red and she began to cough frequently. The white cell count then was 16,750, with 51 per cent segmented forms and 47 per cent lymphocytes. She had retained little food. Her bowel movements had become more frequent and softer than usual, and she had urinated only twice a day for the previous three days. Her feet were swollen.

On admission the temperature was 101 F., pulse 110/min., respirations 20/min. and the weight was 20 pounds. The skin was covered with a partly confluent erythematous macular rash, with beginning desquamation in the diaper area. Axillary and inguinal lymph nodes were slightly enlarged. The lungs were clear despite frequent coughing. The liver had descended 5 cm. below the right costal margin. The hands and feet were moderately edematous. The neurologic findings had not changed.

The hematocrit was 47 per cent, and the leukocyte count was 45,250 mm^3, with 48 per cent granulocytes, 25 per cent lymphocytes and 17 per cent monocytes. Many of the monocytes and lymphocytes were atypical and questionably immature. A test (ferric chloride) for phenylpyruvic acid in the urine was negative. A trace of albumin was present in the urine, with 10 to 15 leukocytes and an occasional erythrocyte. A growth of *Escherichia coli* was obtained from the urine culture. X-ray films of the skull were interpreted as showing microcrania.

Hospital course

Hydrocortisone and intravenous fluids were given and improvement occurred during the initial few days. After about two weeks, however, the patient began having up to 18 watery stools a day. The main problem during the remainder of her life was that of hydration and electrolyte balance. The dermatitis improved at times, but eventually progressed to exfoliation, with superimposed bullous eruptions. On one occasion hemorrhagic vesicular lesions were present on the hands, arms, feet, buccal mucosa, and lips. Phenobarbital had been discontinued on admission, but there were no more seizures. In addition to steroids and intravenous fluids, she was given antibiotics and intravenous salt-poor albumin and blood. Despite all efforts and medication, her condition slowly deteriorated. During the three months' hospitalization the blood urea nitrogen rose from 3 to 22 mg. per 100 ml., the hematocrit decreased to 35 per cent, and the leukocyte count reverted to normal. Platelets were present on all peripheral blood smears. Weight decreased to 12 pounds, although edema of the extremities appeared to increase. The total proteins were 5.4 Gm. per 100 ml. with an albumin of 2.8 Gm. per 100 ml. On the day before death pulmonary edema and tachycardia developed and she became cyanotic about the lips. Following the administration of digoxin, morphine and oxygen, some improvement was noted, but she died shortly afterwards in apparent congestive heart failure.

Autopsy findings

At autopsy the body was markedly cachetic. Extensive areas of exfoliative dermatitis were scattered over the trunk and limbs; these were especially marked over the scalp. The lesions were slightly depressed and covered with a reddish-brown crust. The epidermis was lost in many fields and was replaced by a fibrinopurulent exudate containing gram positive cocci. In adjacent zones, vesicle formation and loss of the normal epidermal pattern were present. A chronic cellulitis was present in all areas examined. Neither intranuclear nor cytoplasmic inclusion bodies were present in any section of skin.

Each pleural space contained 10 cc. of serous fluid, but no adhesions. The lungs were slightly heavy and remained distended after removal from the cavity. The pleural surfaces were normal. The cut surfaces of the lungs were wet and exuded a slight amount of frothy fluid on compression. A generalized chronic interstitial pneumonia with focal areas of atelectasis was present. Scattered throughout the alveolar spaces were large cells measuring 30 to 40 micra in diameter (figs. 1, 2). They contained distinct oval or rounded nuclear inclusion bodies which were about 10 micra in diameter and surrounded by an optically clear halo. The cytoplasm was eosinophilic and contained irregular basophilic inclusion bodies. The inclusion bodies stained well with hematoxylin and eosin.

The heart and great vessels were normal.

The abdominal organs were grossly normal but small for the patient's age. The liver had a normal lobular pattern, but contained many small foci of hematopoietic cells. Intranuclear or cytoplasmic inclusion bodies were not found.

The kidneys were normal grossly, but the anatomic pattern was that of a newborn infant: the glomerular tufts were composed mainly of large cuboidal cells rather than the flattened epithelium seen in normal infants of this age. The epithelial layer of most capsules was composed of similar cells. Many of the tubules were dilated, and in some fields the epithelial cells were large and contained intranuclear and cytoplasmic inclusion bodies identical to those described in the lungs (fig. 3). The inclusions were less frequent than in the lungs and were present mainly in the proximal tubular cells.

Examination of tissue from the thyroid, parathyroid, thymus, lymph nodes, skin, intestinal tract, bone marrow, adrenal glands, pancreas and spleen failed to reveal cellular inclusion bodies. Permission for examination of the central nervous system was not obtained. The salivary glands were not removed because the nature of the disease was not suspected at the time of autopsy. Cultures for viruses were not made.

Comment

The most interesting feature of the present case is that of the severe, unremitting diarrhea. A correlation of diarrhea with intestinal involvement is difficult, since diarrhea has been reported both in the absence and presence of inclusion bodies[3]. In some cases, moreover, typical nuclear in-

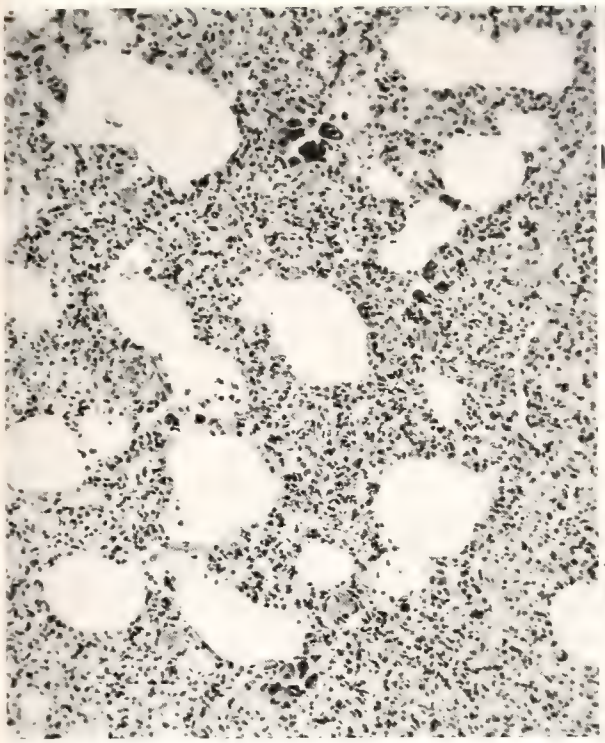


Fig. 1. Photomicrograph of the lung demonstrating the large intra-alveolar cells containing nuclear and cytoplasmic inclusion bodies. A marked interstitial pneumonia is also present. (Hematoxylin and Eosin 100x)

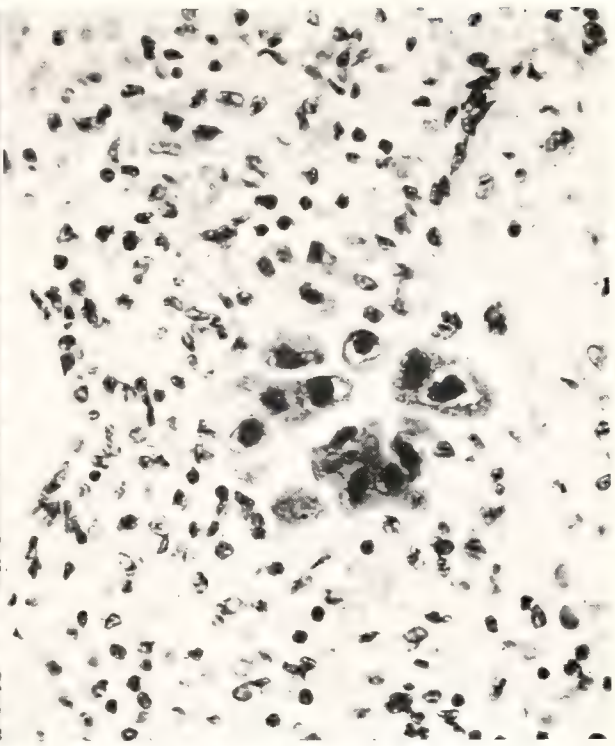


Fig. 2. The nuclear and cytoplasmic inclusion bodies characteristic of the disease are present in the giant mononuclear cells in the alveolus. (Hematoxylin and Eosin 400x)

inclusions were found in the gastrointestinal cosa when diarrhea is absent. Though no inclusions were found in the gastrointinal tract, the diarrhea could have been a manifestation of the generalized disease.

The dermatitis was thought to be a sensitivity reaction to either Dilantin or phenobarbital and probably not related to the salivary gland virus disease. In several reported cases, however, a dermatitis has been described[3,4]; and in one, typical inclusion cells were present in the sweat glands[5].

Evidence of renal impairment was suggested by an increasing blood urea nitrogen, and by slight amounts of albumin and leukocytes in the urinary sediment. There was no evidence of a bleeding tendency except on the one occasion when hemorrhagic vesicles developed over portions of the body. The hepatomegaly was secondary to congestion and foci of hematopoietic cells; such foci are notable features in many cases. The splenomegaly was secondary to congestion only. Organs other than the

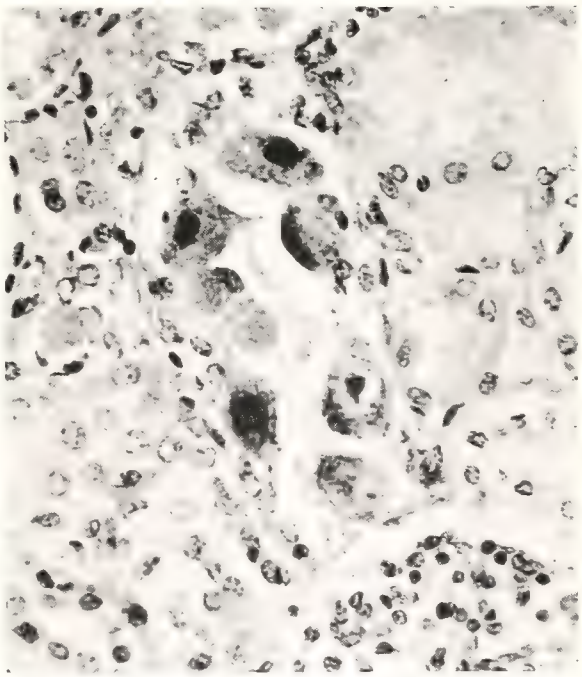


Fig. 3. Dilated proximal tubule of the kidney containing large cells with nuclear and cytoplasmic inclusion bodies. (Hematoxylin and Eosin 600x)

lungs and kidneys did not contain typical cellular inclusion bodies.

Correlation of the neurologic manifestations and the microcrania of the present case with those of generalized salivary gland virus disease cannot be made since the central nervous system could not be examined. In patients with this disease, however, the brain sometimes shows typical cellular inclusions and anomalous developments, suggesting that the neurologic disease in this case may have been due to a malformation related to the viral infection. Crome and France[6] report one case associated with microgyria and refer to other documented cases with microgyria, hydrocephalus, periventricular calcification, focal softening and hemorrhage, and other lesions. The periventricular calcification has important diagnostic implications and is discussed below.

The factor or factors responsible for activation of the apparently latent infection in this child are not evident, as is true in most instances of the post-neonatal group. It is possible that the drug reaction lowered cellular resistance and allowed a dormant, localized disease to become disseminated. It is also possible, however, that all signs and symptoms were related solely to dissemination of the salivary gland virus.

Diagnosis

In most cases the disease is rarely diagnosed during life. Hematologic studies are nonspecific, commonly showing a moderate lymphocytosis and slight immaturity of the leukocytes. A normocytic anemia and thrombocytopenia occur in many neonatal cases. With renal involvement there may be a rise in blood urea nitrogen; albumin and leukocytes may be present in the urine. Liver function tests may detect parenchymal cell damage. All of these abnormalities are nonspecific.

The most specific means of diagnosis at the present is the demonstration by cytologic examination of inclusion-bearing cells. The typical cells may be found in the urine, bronchial secretions, or gastric washings. The kidneys are commonly involved in both the neonatal and post-neonatal phase, and the most rapid, simplest, and cheapest means of establishing a positive diagnosis in these age groups is by cytologic examination of the urinary sediment. In some post-neonatal cases and in adult cases, examination of sputum or gastric washings may establish the diagnosis, since patients in these groups frequently have pulmonary involvement. Details of collection and preparation of specimens are given in the excellent review by Nelson and Wyatt[7]. With central nervous system involvement, these cytologic methods applied to the cerebrospinal fluid may establish a diagnosis[8]. Biopsy materials from the liver, lungs, and kidneys have contained the typical inclusion bearing cells in routine paraffin sections.

Radiologic diagnosis is dependent on the presence of periventricular calcifications which outline the lateral ventricles[3]. Recovery of the virus by cultural methods has been successful[9], but at present only a few centers have the equipment necessary for this technique.

Treatment

There is no specific treatment. Antibiotics, steroids, gamma globulins, and blood have been employed, but, in most cases, with disappointing results. It is not known whether gamma globulins and blood contain effective antibodies to the virus, but Rowe and others[10] demonstrated complement-fixing antibodies in 53 per cent of unselected persons between 18 and 25 years of age and in 81 per cent of persons over the age of 35 years. In a group of newborn infants, 71 per cent had antibodies, whereas in the age group of 6 months to 2 years only 14 per cent had demonstrable antibodies. It has been suggested that prolonged steroid and antibiotic therapy may further weaken the host's defense against the disease.

Summary

A case of generalized salivary gland virus disease occurring in the post-neonatal period is presented. A brief discussion of the important features in the neonatal, post-neonatal and adult forms of the disease is included. Recently developed means of making an antemortem diagnosis are discussed. The value of cytologic examination of urine, sputum, or gastric washings in making such diagnoses is emphasized.

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Antibiotic Resistant Pulmonary Staphylococcic Infections

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Staphylococcic infections have been a challenging problem for many years. Because of the wide distribution of staphylococci in the environment and on human body surfaces, the problem will probably remain for a long time.

Impressive evidence of penicillin's bactericidal potency was available soon after its introduction. Strains of bacteria gradually emerged, however, that exhibited resistance to this antibiotic. This was particularly evident in the case of *Staphylococcus aureus*. Additional antibacterial agents were introduced only to lose much of their effectiveness as increasing numbers of these antibiotic-resistant strains appeared. The following outline lists known biologic characteristics of the staphylococcus which help explain its formidable nature.

1. Toxins and Lysins
   a. Exotoxin (lethal toxin; potent; when elaborated **in vivo**, its lethal effect appears to be delayed until a critical threshold dose has accumulated; associated with necrotic and hemolytic reactions in a majority of toxigenic strains of **Staph. aureus.**)
   b. Enterotoxin (potent toxin acting primarily upon the gastrointestinal tract)
   c. Dermonecrotic toxin (necrotizing toxin; hemolysin?) alpha$_{1,2}$
   d. Hemolysin (alpha, beta, gamma, delta; rbc lysins)
   e. Fibrinolysin (dissolves fibrin clots; restricted essentially to coagulase-positive human strains)
   f. Leucocidin (destroys leucocytes)
2. Enzymes
   a. Coagulase—regarded as the **sine qua non** for pathogenicity (coagulates citrated or oxalated plasma); also neutralizes the antibacterial activity of normal human serum for staphylococci).
   b. Hyaluronidase (attacks the mucopolysaccharide — hyaluronic acid — intracellular ground substance; "spreading factor")
   c. Staphylokinase (plasminogen activator) (fibrinolysin?)
   d. Penicillinase. This is a notorious substance responsible for treatment failures (inactivates penicillin)
   e. Gelatinase
   f. Proteinase
   g. Lipase

Note: Pathogenic human (often of hospital origin), coagulase-positive staphylococci frequently belong to general phage group III, types 80/81. These strains can now be further identified by fluorescent antibody staining techniques.

Hospital Experience

An experience in a large general hospital points up facets of the problem[1]. During a two-year period more than 40 cases of antibiotic-resistant staphylococcic pneumonia, principally due to a hospital-acquired strain, were diagnosed and treated. This hospital contained a large segment of long-term patients, and staphylococcic pneumonia first appeared as a complication of

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pre-existing major diseases such as carcinoma, lymphoma, and urologic disorders. In later instances, staphylococcic infection occurred postoperatively in more newly arrived patients, and suspicion was directed toward staff personnel, both medical and surgical, as well as nursing attendants, who might be carrying pathogenic strains and/or hidden lesions (furuncles, boils, and so forth). Screening measures were instituted to identify these carriers and to limit the assignment and movement of such personnel. Finally, a sharp upsurge in incidence of staphylococcic infections occurred at the height of the Asian influenza epidemic in the fall of 1957. In addition to patients who acquired infections in hospital, 1 medical officer, 1 nurse and 5 hospital corpsmen fell victim to staphylococcic pneumonia, emphasizing the communicable aspects of this disease problem.

At the beginning of the Asian influenza epidemic, a significant number of known staphylococcic infections was present in the hospital.

Case 1

The urgent and widespread character of this problem had previously been recognized when one of our young staff hospital men was stricken. He had suffered from a cold and had resorted to self-medication with several different antibiotics during a three-week period. During this time his fiancee, a hospital WAVE, was hospitalized for furunculosis, and he had also attended a patient with severe staphylococcic pneumonia. Shortly thereafter he was admitted to the sick list with pleuritic pain and signs of pneumonia. A chest roentgenogram on the morning he was admitted was interpreted as being essentially negative. By afternoon extensive infiltration was demonstrable in the right base, and by the following morning radiographic findings revealed areas of consolidation and infiltration involving the entire right lung with extensive involvement of the left lung. A positive blood culture yielded coagulase positive **Staphylococcus aureus**, phage type 52-42B-80/81, the so-called "hospital strain." Despite heroic measures he died on the third hospital day.

This shocking case served to provoke the action outlined in table 1.

The Pneumonia Team consisted of four medical officers who stood a telephone watch and were available as consultants around the clock. Whenever a patient suspected of having pneumonia was admitted, the medical officer got in touch with a member of the team and discussed the general problem, the bacteriologic study of the sputum, and the radiologic changes. In this manner a constantly high level of clinical awareness of staphylococcic pneumonia was maintained. The theme of this operation was "do it yourself," for the admitting doctor collected and examined the sputum, interpreted his patient's x-ray films, and sought consultation at the earliest opportunity. Diagnosis was made earlier and treatment was standardized; tracheostomy was performed in 21 cases, both as a precautionary and as an emergency procedure. These factors are believed to have contributed significantly to curbing the mortality rate in this series.

Table 1
Task Force Staphylococcus
January 15, 1957

I. Antibiotic Control Board—chloramphenicol, novobiocin and ristocetin reserved for severe infection
II. Pneumonia team (telephone watch)
III. Epidemiology center
  1. Epidemiology officer
  2. Sanitation technician
  3. Bacteriologist
  4. Representative from Medicine, Surgery, Genitourinary, Laboratory, and Nursing services.

Hemolytic, coagulase-positive staphylococcic pneumonia may present as a fulminant process terminating in death before bacteriologic proof can be obtained. In such instances as case 1, large doses of intravenous bactericidal antibiotics should be given while awaiting bacteriologic confirmation. The following case highlights the multiple complications and therapeutic frustrations that may attend a fulminant disseminated infection.

Case 2

A 21 year old white man was referred to the Medical Service because of pneumonia, etiology undetermined[2]. The history revealed that he had sustained a fracture of the second cervical vertebra in an automobile accident. Treatment had consisted of "prophylactic penicillin and streptomycin" and tong traction. While he was receiving these antibiotics, a secondary infection of the scalp became evident. Generalized urticaria developed, and penicillin was stopped. Two days later a fever of 106 F. and a nonproductive cough developed. The patient was then started on terramycin, 500 mg. given intravenously twice daily, with no effect. A roentgenogram of the chest revealed pneumonia in the right upper lobe. Intra-

venous terramycin was continued for two days, during which time his condition deteriorated rapidly. When received on the Medical Service he was semicomatose and cyanotic.

A tracheostomy was performed and the aspirate cultured out hemolytic **Staph. aureus**, coagulase-positive. A culture of the scalp infection and blood cultures revealed the same organism. Chloramphenicol, 500 mg. given orally every four hours, was started (before the culture reports were obtained). During this time his condition worsened, with the rapid appearance of left ventricular failure and cyanosis. Intravenous sulfadiazine, 3.75 Gm. every 12 hours, was started; rapid digitalization and phlebotomy were performed, and respiratory support was maintained by a Drinker respirator. During the next three days the temperature dropped by lysis, and objective improvement was evident; however, on the fourth day, semicoma recurred.

Sensitivity studies on the material previously obtained for culture revealed **in vitro** sensitivity to Aureomycin, bacitracin, chloramphenicol, erythromycin, nitrofurantoin, neomycin, tetracycline, hydrochloride, and novobiocin. **In vitro** resistance was found to dihydrostreptomycin, penicillin, polymyxin B, terramycin, and sulfadiazine. Erythromycin, 200 mg. given every four hours intramuscularly, and Aureomycin, 500 mg. every six hours by nasogastric tube, were administered, resulting in a drop of temperature to 102 to 103 F., where it remained. Under this regimen, however, the pneumonic process extended to involve the entire right lung and the left upper lobe.

On the fifth day of this phase of the regimen, the patient had a right spontaneous pneumothorax, with resulting pyothorax and open bronchopleural fistula. Subsequent antibiotics and chemical agents consisted of combinations of novobiocin, sulfadiazine, erythromycin, and streptomycin, during which time the patient developed a persistent tachycardia of 150, pericardial friction rub, electrocardiographic evidence of pericarditis, fixed specific gravity of urine, and continuous albuminuria. Fever continued between 102 and 104 F., and the spleen became palpable. A full-blown septicemia was evident at this time.

All values remained static until ristocetin, 1000 mg. initially and 250 mg. every six hours, was started intravenously, in combination with the previously mentioned antibiotics. Ristocetin was continued with a gradual tapering in dosage for 12 days, at which time fever dropped by lysis. Evidence of pericarditis disappeared, the spleen was no longer palpable, blood cultures became negative, dissemination of the pneumonic process appeared to be arrested, with localization of empyema pockets amenable to thoracentesis and closure of the bronchopleural fistula. Rapid subjective and objective improvement of the patient ensued. Intravenous ristocetin was discontinued after 12 days, and the patient was maintained on oral novobiocin, 500 mg. every six hours, for the next two months.

This case demonstrates the gravity of a hospital-acquired staphylococcic pneumonia and its complications. Eighteen combinations of 10 different antibiotics and sulfadiazine were used with no apparent response except for transient response to sulfadiazine, to which resistance quickly occurred. Erythromycin and novobiocin were ineffective; however, when ristocetin was added, clinical improvement was noted. This man was discharged fully recovered, and is carrying on at full activity.

Radiologic characteristics

Early in this experience it became evident that there were radiologic characteristics peculiar to staphylococcic pneumonia, of high reliability in leading to diagnosis.

Radiologic Findings

Rapid Progression—in hours

I. **Early**—small patches of consolidation
II. Infiltration c circumscribed translucencies
III. Pleural effusion
IV. **Typical**—pneumatoceles
V. Spontaneous tension pneumothorax c or s empyema

Analysis of antibiotic sensitivities revealed most of the encountered organisms in our series to be resistant to the sulfonamides, tetracyclines, streptomycin, and penicillin.

Erythromycin, which enjoyed great popularity in the surrounding community, was ineffective in dealing with our severe staphylococcic infections. The best therapeutic results were obtained with chloramphenicol and intravenously administered ristocetin. Vigorous supportive therapy included tracheostomy. Gamma globulin was administered to 16 patients as adjunctive therapy.

An excellent report by Ede, Davis, and Holmes emphasized early surgical therapy for complications[3]. Pulmonary complications encountered in our experience were pneumothorax, empyema, lung abscess, and tension cysts. Only 2 patients had significant respiratory disability after recovery.

Comment

A recent editorial in the *New England Journal of Medicine* pointed out the critical role that combinations of antibiotics may have played in bringing about the present state of affairs[4]. The most popular and at the same time most dangerous of the anti-

biotic combinations is that of penicillin and streptomycin, employed to treat many cases when streptomycin is almost always redundant. Unfortunately, it also is used for the prophylaxis of infections which it rarely prevents. Instead, it has contributed to the occurrence and increased severity of antibiotic-resistant infections and serious toxic effects. A large number of new combinations has been introduced. Since none of the combinations has clearly shown any therapeutic advantage over the proper use of the more effective component alone, the patient is unnecessarily placed in "double jeopardy"—of toxic reactions and of acquiring sensitization to both agents.

Berntsen and McDermott[5] observed that the carrier rate among hospitalized patients receiving tetracyclines increased nearly threefold over the rate among hospitalized patients receiving no antibiotics. In addition, new strains were substituted for old among antibiotic treated patients at twice the rate observed in untreated patients.

On the basis of substantial evidence suggesting that multiple-resistant strains of *Staph. aureus,* hospital variety, are of enhanced virulence, Barber and her colleagues at Hammersmith Hospital in London made a vigorous attempt to cut down the incidence of infection by these organisms[6]. This effort was combined with strict application of various anti-cross-infection measures that had been previously introduced, and featured: (1) marked restriction of the use of all antibiotics for prophylactic purposes; (2) strict limitation of the use of penicillin; (3) the general employment of double chemotherapy, each drug being used in full doses and only for definite indications. Under this policy a significant reduction of antibiotic-resistant infections occurred and concomitantly the number of infections sensitive to penicillin rose sharply.

It may be pointed out that agents like Kanamycin, vancomycin and ristocetin have had little tendency to produce resistance. Such resistance is difficult to produce *in vitro.* These antibiotics are given intravenously, a limiting factor in their wholesale use.

Conclusion

In general, when dealing with severe staphylococcic infections, a focus on target with a narrow spectrum antibiotic may bring best results. Success with ristocetin and vancomycin has been attributed to this factor.

Awareness of the manifestations and gravity of staphylococcic pneumonia, with attention to early diagnosis and decisive therapy, both medical and surgical, is to be emphasized as essential for the successful management of this disease.

Measures to lessen the incidence of staphylococcic infections have been effective when they have emphasized a return to principles of rigid asepsis, isolation of infected patients and judicious control and use of antibacterial agents. Recognition of the fact that the use of steroids and antibiotics may actually encourage invasion by staphylococci is essential. Observance of the foregoing measures may then go far toward suppressing, if not eradicating, these infections.

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Some Facts About Nursing in North Carolina

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May I thank the program committee for the invitation to appear before this assembly today. I consider it a real privilege and an opportunity to share with you some information regarding nursing and nursing education in this state.

What I have to say about North Carolina's needs in nursing is not unique to this state, but this fact does not make our needs any more palatable. And what I have to say in relation to shortages of prepared people is not peculiar to nursing alone. We are experiencing a real lag in the preparation and retention of members in your group, in my group, and in other paramedical groups as well. You are as aware of these facts as I.

In looking closely at nursing in North Carolina, I could quote all types of figures for you. But the fact remains that we are short of two things—nurses and nursing.

The Shortage of Nurses

Why are we short of nurses? Here are five principal reasons for this situation.

1. We do not recruit enough capable young women—and men, too—into this field. Other areas of endeavor are earnestly competing for high school graduates.

2. Out of the number we do recruit, the quality of the candidates yields about a 35 to 40 per cent drop-out—not in all cases for scholastic reasons, but in the majority. Too many students can't read, write, and think productively. The course in nursing is rugged. And high school has never given them so much to do in so short a time.

3. Then after completing the course, anywhere from 25 to 35 per cent fail one or more of the five subjects in the licensure examination.

4. Then after licensure we are constantly losing from two to three nurses to other states for every nurse who come here to work.

5. And finally, no small factor in this problem is the number of nurses who are inactive in the profession. After a number of child-rearing years a large percentage come back. But presently there are over 5,000 inactive nurses in North Carolina.

I have enumerated five serious problems in relation to the short supply of nurses. There are others quite familiar to all of us.

The Shortage of Nursing

Next, let's look at the shortage of nursing. Quite naturally a limited number of nurses yields less nursing. But that isn't the only limiting factor.

Nursing is perhaps best described as the giving of direct assistance to a person, as required, because of the person's specific inability to care for himself for reasons of health[1]. Self-care means the care which all persons require each day, and you well know what modifications are necessary during illness.

Added responsibilities

Our horizons in health care and medical management have expanded more in the last 25 to 30 years than in all previous history combined. This lays tremendous responsibility on your shoulders, not only in cure but in prevention and rehabilitation as well. The new techniques, methods, equipment, drugs, and treatments for that 30-year period would defy enumeration by anyone in this room today. You have asked my group to help carry some parts of your expanding responsibilities. We have tried—we are trying. Every task that you no longer have the time to do or that you feel is safe for one with less depth of medical understanding you quite naturally ask the nurse to do. Just two examples—very elementary, yet significant: Within 60 years the thermometer has moved from the red plush box in your bag to every home and hospital. And in the last 30 years the sphygmomanometer has come to be used even by the practical nurse.

Today we are struggling with the task of starting intravenous fluids—and trying to determine what safe steps can be taken to ensure better care of the "about to deliver" mother—among a host of other shifting responsibilities.

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Why do I mention shifting of some responsibilities? First, because it is a natural development to a point; and next, because the greater the demands on the nurse to support the doctor in his plan of medical management, the less time she has to meet the needs of the patient which have no doctor's orders written for them.

Complexity of organization

Another factor in the shortage of nursing is the highly complex organization of today's hospitals. Much nursing time is consumed in the mechanics of this organized structure. Some say it is so highly structured that it is impersonal—and this fact is poorly understood by a sophisticated society.

What happens to the person—the nurse who by the very elements of her employment no longer has time to assist the patient? In due time she is apt to be satisfied in managing, scheduling, ordering, and doing the highly technical things falling to her professional lot. If not, she is frustrated, resigns, and tries to find some place where she can get back to the patient's side. Then she is accused by management of not wanting to take responsibility. I ask you—responsibility for what? The patient, yes, but management and direction of others, no. Many nurses do not want to be managers of nurses; they want to take care of patients. Our present structure inhibits this desire.

No one factor is responsible for the shortage of nursing, as you can see. Many things are at work to bankrupt professionally the bedside nurse today. If there ever was a time when hospital administrators, doctors and nurses needed to look critically at how patients are getting hospital, medical, and nursing care, it was yesterday. This joint action is long overdue.

Inadequacies in Nursing Education

Nursing education in North Carolina is almost low man on the totem pole in this country. We have schools—we're eighth in the country in number. We have students—we're thirteenth in the country with them. But when we put our graduates against graduates from other states on our licensing examination, we are well toward the bottom. I have some opinions as to why this is happening—some based upon fact and others upon feeling. Many of you have opinions too—likewise based upon fact and feeling.

Quality of teaching

One opinion I have is that the quality of teaching is below par. Why do I think so? Because 31 per cent of our teachers are not trained beyond their three-year diploma programs. They are not prepared as teachers. Teaching is itself a specialized art.

I am not talking here about those few unique individuals among the 31 per cent who are naturals in the teaching role. I am concerned that too many of the remaining souls in that group are not giving the student a fair chance to learn nursing. It could and should be said that merely having a degree does not ensure that fair chance to learn, either. But if additional preparation means anything, it should provide a broader, deeper insight into the content to be taught, and effective ways to get it across.

Along with our lag in preparation for teaching, we are short in numbers of teachers. As of March 30, 1960, 14.6 per cent of the teaching positions in diploma schools were unfilled. And the prospect is worse for fall. We do not have the teachers. These things I know to be facts.

Content of teaching

Now I have a feeling that part of our difficulty in our programs is what I call curriculum obesity and patient-practice starvation. When people in charge of schools do not know how to design and implement a curriculum, there is a great urge to add first one course and then another, thus thinking that they are keeping the program up to date. This is where the obesity sets in, and for every unneeded hour added to the classroom schedule we deny the student the opportunity of that hour to put into action some of her learning. What has happened is that there is less and less time to teach and learn the art of meeting the needs of patients.

In this process of addition we have not carefully scrutinized what we teach, nor have we done a good job of distilling those elements which have always been and will continue to be the essence of effective nursing. We are trying—but it takes a qualified person to lead the faculty to such action. When such a person is lacking, a school rocks along, not knowing how to tighten up

the curriculum and put back into nursing those elements that have been crowded out. Wise choices must be made in selecting content. If the essence of nursing has been replaced with what appears to be more important content, the faculty has some important decisions to make.

We need to help the student to learn to think through nursing situations—to draw on her knowledge and develop judgment in carrying out her designated ministrations. Too often we fill the student with facts and then siphon them off in a test. Until these facts are put to practical use—until they are understood and translated into nursing care action—are they learned?

I honestly believe that this is one important and significant reason why we have so many State Board failures. The questions are just not that difficult. They are thought-provoking—yes. They are situational—yes; they draw upon knowledge—yes; and they ask for designated action, judgment, reading ability, familiarity with vocabulary, and reasoning ability.

We have recently visited a state in the deep South to try to determine why their graduates pass State Boards and ours fare so poorly. One finding was that every school has some prepared faculty. They make it their business to teach less medicine and more nursing. They focus on the patient in their teaching and in the student's practice. This we are beginning to do, too, but we are having a hard time shaking loose from the idea that the focus should not be on the disease but on how to nurse the patient who has specific needs because he has a certain disease or deficiency.

Need for a Joint Approach

I will never have a better opportunity to thank you ladies and gentlemen for your continuing efforts and interest in nursing education in this state. We appreciate and need your contributions. We also need your continued understanding to help us with our boot strap operation.

I would like to see North Carolina lead the nation in a joint study of this serious problem of shortage of nurses and nursing. I would like to see medicine, hospital administration, and nursing attack the problem together. In some states the medical group appoints a committee, makes a study, and comes out with a report. Hospital administration agonizes over it and from time to time tries to solve the whole thing at a convention. This problem is much too complex for such atomistic attacks. It is serious enough to tax the combined effort of all concerned. North Carolina could make such an approach, and by so doing could set an example of the leadership so woefully needed today in arriving at solutions.

We had some joint action in North Carolina during the Good Health movement. The nation watched North Carolina at that time with great interest. A report was published in 1950 concerning our needs in nursing. We have not done much during this decade to come really to grips with those recommendations or to know whether they were realistic or attainable. Many of the recommendations are still unmet—and, I might say, unknown and forgotten.

We must come to grips with what is realistic for us to do in North Carolina and what is unattainable. To do this we need facts—more facts with less emotionalism and I might even add less provincialism. This is a serious challenge. Until we meet it, hospital administrators, doctors, and nurses will continue to talk about this problem in misty generalities.

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> . . . it is necessary that both in schools and in universities we should rediscover the part played by leisure in education. There is a danger that we may so fill our pupils' lives, not only with specialist studies, not only with the process of overfrequent examining, but with general education and social activities as well, that they may never have time to read or talk or even simply to think what it is all about.—Sir Eric James, Brit. M.J. 2:576 (Sept. 6) 1958.

A Rural Home Care Program

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To tell you about the Rural Home Care Program now being carried on in Person County, North Carolina, I must tell you a little about the county. Person County is one of five counties making up the district of which I am director. It is located in the north central portion of the state and covers an area of 20 miles square, with one town, Roxboro—population 5,000. The total population of the county is 25,000 of whom about 40 per cent is non-white. It is one of the few counties that experienced a population loss between 1940 and 1950. This loss was attributed to the migration of able-bodied persons in search of work. These migrants leave their children behind in the care of grandparents, creating many problems and difficult financial situations.

Person County is primarily rural, deriving its income chiefly from farm products (tobacco), with a few small manufacturing companies located around the town of Roxboro.

Person County has 11 practicing physicians—one retired for all practical purposes, two surgeons, one internist, and seven general practitioners, two of these being over 70 years of age. There is a good 60-bed general hospital (constructed with Hill-Burton funds). The Health Department is housed in a new building. Within 50 miles of Roxboro are four large medical centers. The working relationship within the county has been cooperative and harmonious.

Tuberculosis Program Paves the Way

When I came to Person County in 1944, I found a minimal tuberculosis program directed toward the far advanced cases because of limited facilities and personnel. At that time, tuberculosis and venereal disease were the most pressing health problems in the county. As a result of improved medication, refined diagnosis and techniques in health education, the venereal disease problem has been brought under control. We have worked just as diligently on our tuberculosis problem, with the result that our death rate from tuberculosis is virtually nil, while our case rate increases and our total number of cases under supervision multiplies. Last year our county had one of the highest case rates in the state.

I emphasize the role of tuberculosis in our set-up because of its direct bearing on the present Home Care Program. Fifteen years ago when it became evident that many of our tuberculous patients were dying at home while awaiting sanatorium admission, a program of home care was a pressing necessity. At the suggestion of the County Medical Society, the County Board of Commissioners provided extra funds for hospitalization, employment of additional public health nurses, and purchase of equipment for the home care of the tuberculous. In this program, the Health Department played the major role by furnishing the x-ray facilities for screening, diagnosis, and follow-up, and I provided medical care within the home for patients who were under the supervision of the local doctors.

This program was agreed on and developed jointly by the Health Department, Medical Society, County Board of Commissioners, and other agencies both voluntary and official. At this particular time no young doctors were practicing within the county, and it was the wish of the local medical society that I provide the tuberculosis treatment while they supervised the case and treated any complications or acute illnesses that occured. Later, the County Board of Commissioners provided funds for drug therapy for tuberculosis cases.

As a result of the successful handling of the tuberculosis problem in the county and the harmonious cooperation of everyone concerned, it was no problem to secure support for the expanded Home Care Program. In addition to our Tuberculosis Program, we were confronted with an aging population afflicted with so-called "chronic disease." Throughout all these years of work, publicity was given the work being done and the needs existing within the county. All media were used to inform the county officials and the public of the needs of the county.

Read before the Regional Conference on Aging, Atlanta, Georgia, March 7, 1960.

Project Proposal Approved

Several years ago the local, State and American Medical Associations, the local, State and National Public Health agencies, and officials at all levels of government began to realize that a program for Home Care should be developed, and that it should not be restricted to urban areas but made available to all people. Until we undertook to provide home care in this rural area, no similar project had been developed. When it was suggested that support from official agencies, the Public Health Service, and the State Board of Health could be secured if the county would provide some funds for matching purposes, it was not difficult to secure the local support needed.

In cooperation with the Person County Medical Society, the State Board of Health, and the U. S. Public Health Service, a project proposal was prepared and submitted. After the State Board of Health and the Public Health Service gave tentative approval, the County Commissioners appropriated a sum of money for matching purposes. Final approval was given the project and the following personnel were authorized: a medical social worker, physical therapist, two public nurses, and one clerk. Also, funds for contractural purposes were made available.

The tentative project proposal was not prepared or submitted until it had been discussed in detail with the local medical society, and a set of policy and procedure statements relating to every phase of the anticipated program had been developed. The local society agreed, without a single dissenting voice, to provide medical care and supervision for all persons residing within the county who were referred to and carried by the project. The purpose or objectives are "To show how National, State and Local agencies, both official and non-official, can coordinate their efforts in a program for Home Care and restoration of the chronically ill in a rural area and to determine what personnel and funds are necessary to provide for services aimed at self care or self support by the patients."

At this time, it was agreed that the doctor-patient relationship would remain in effect at all times; that the project would not accept patients referred by anyone other than the physician. The physician would continue to direct the care of the patient at all times, the Health Department would provide services available through the staff, and no fee would be charged for services rendered by the staff of the Health Department. After the endorsement by the local medical society, the project proposal was submitted through official channels. Operation began officially when the physical therapist reported for duty. The project is now operating with a full staff of qualified workers.

Home-Care Integrated into Total Health Program

We have endeavored to integrate this program into the over-all program of the Health Department and of the many other agencies providing health services in the community. The services available through the project are nursing, physical therapy, social service, occupational therapy, nutritional counseling, medicine and sick room supplies, orthopedic equipment, and health education. Every other community resource is brought to bear upon the patient's illness through the coordination of the Health Department. Lay committees organized during the planning stage are Health Education, Procurement and Supply, Vocational Rehabilitation, Social Service, and Chaplain and Recreation. In addition, there is an advisory and technical committee made up of representatives from local and State medical societies, local and state welfare associations, State Nurses' Association, State Board of Health, and the University of North Carolina School of Public Health.

All benefits to the individual patient in the program are the result of a concerted "team effort." The Health Department team teaches and provides services as ordered by the attending physician. The patient and his family are taught the proper care of the patient through the actual services of the physical therapist, the Public Health nurse, the medical social worker, and the nutritionist. Thus the private physician and this team work as an effective unit toward the achievement of maximum recovery and physical independence of the patient.

I spent much of the time alloted me in discussing the history of the Person County Home Care Demonstration Project and the needs that brought it into being. This project was a natural outgrowth of community recognition and interest. In fact,

the medical society, county officials, and the public at large have cooperated in a manner that has been heartwarming to those of us who so often have seen this segment of our population cast into the role of the forgotten man. This is a type of program that can be developed and operated in any rural area where there are an informed public, medical facilities, and an agency that can serve as coordinating agent.

I want to restate the purpose of the project, "To demonstrate how Federal, State, and Local Official and non-official agencies in the community as individuals and as a whole can coordinate their efforts in an organized program for the Home Care and Restoration of the chronically ill in a rural area. Further, to determine the number of people and the funds necessary to provide restoration services which aim at self-care and/or self-support of the patients."

Aims and Achievements

This home care program in Person County has been in operation since September 8, 1958. We think that the following results have been achieved:

1. The first rural Home Care Project has been established.
2. The project has been developed without serious conflicts of interest.
3. It has had public acceptance.
4. There has been a gradual build-up of patients admitted to the program.
5. A harmonious working relationship with the doctors has been maintained.
6. A physical therapy department has been prepared and equipped at the county hospital.
7. The community has united to support and promote the project.
8. The project has provided a health education topic.

There have been problems as may be expected with any new program; but these were chiefly associated with record development and recruitment of specialized personnel.

You might ask, "What are the anticipated results?" I will list the major aims.

1. To provide information about the cost of home care in a rural area.
2. To shorten the period of hospital stay for patients with long-term illness.
3. To extend into the home services ordinarily restricted to hospital.
4. To reduce the number of people disabled by chronic conditions.
5. To effect a reduction of cost to the county for hospital and welfare care for persons with long-term illness.
6. To provide adequate medical care for the people of Person County.

Analysis of Results

Between September 8, 1958, and December 31, 1959, 55 patients had been referred. Of these, 54 were admitted to the program and given service. Before a person is accepted several things must be done:

1. The patient is referred by a doctor, using a form developed by the team.
2. Representatives of all disciplines visit and evaluate patient.
3. An admission conference is held with the following in attendance: the physician in charge of case, the medical social worker, the physical therapist, a Public Health nurse, and other interested persons.
4. Patient must show potential for restoration to self-help or employment.

Up to the present time, 13 patients have been discharged (by conference similar to admission conferences) from the program, with 40 active at the present time and 1 classed as inactive. Of the 13 discharged, 2 achieved maximum benefits, 6 died, 3 moved out of the county, and 2 were discharged for other reasons. Of the 40 given service, 29 were classed as active in the home, 5 as active out-patients, and 6 as advisory in the home. When the program began, there were 3 chronically ill persons in the local hospital who had been there more than a year. Today 2 of these are at home and the third has died. One of the patients that we are caring for in the home today reportedly cost a hospital in a neighboring county $17,000 before discharge.

You will recall that to date 6 patients have died. This mortality can be explained by the fact that the median age for patients accepted on the program is slightly more than 67 years. Of the total 45 given care during the past three months, 12 were 60 to 69 years of age, 13 were 70 to 79, and 4 were more than 80.

Thirty-five of the patients were white and 10 were non-white, eighteen were male and 27 were female. The socioeconomic classification was as follows: high bracket,

6; middle bracket, 16; low bracket, 10; Public Assistance recipients, 13. Please note that we do not deny admission to anyone because of financial status or race.

Of the 45 patients handled during the past three months, primary diagnoses were as follows: cardiovascular accidents, 15; arthritis, 11; fractures, 9; neurologic disorders, 5; burns, 2; scoliosis, 1; multiple sclerosis, 1; muscular distrophy, 1. You might be surprised to learn that obesity was listed as the secondary diagnosis in 6 cases; arthritis in 5; high blood pressure in 5; diabetes in 4. Many other conditions made up the remainder.

To render the needed services to these patients, 36 admission conferences, 90 review conferences, and 4 discharge conferences have been held during the past year, for a total of 130. Visits made to patients by members of the health department team were 630 by public health nurses, 849 by the physical therapist, and 96 by the medical social worker. These figures may sound small, until it is remembered that we are working in a small county with a limited staff, limited financial resources, and that we have experienced difficulties in securing qualified personnel.

I have said that the project would provide care only for persons who will benefit and can be restored to self-care or self-support. The project itself does not provide for the admission of terminal care cases. Patients needing terminal care are admitted to the general public health program and are serviced by the staff of the Health Department.

Conclusion

The people of Person County are proud of the fact that this is the first project of its kind to be carried on in a rural area in the United States. We are determined to make it work and to provide answers to the questions posed by those supporting the project. The questions are:

1. What are the benefits derived from such a project?
2. Are they too expensive?
3. How can medical care of the chronically ill be financed best?

We are convinced that the project and the Home Care Program provides aid and assistance to the general practitioner or local practitioner in the care of his patient in the county hospital and the home.

SPECIAL REPORT

Report on Actions of the House of Delegates
American Medical Association
One Hundred Ninth Annual Meeting
June 13-17, 1960
Miami Beach

Health care for the aged, pharmaceutical issues, occupational health programs, relations with allied health groups, and relations with the National Foundation were among the major subjects involved in policy actions by the House of Delegates at the American Medical Association's One Hundred Ninth annual meeting held June 13-17 in Miami Beach.

Dr. Leonard W. Larson of Bismarck, North Dakota, former chairman of the A. M. A. Board of Trustees and of the A. M. A. Commission on Medical Care Plans, was named president-elect by unanimous vote. Dr. Larson will succeed Dr. E. Vincent Askey of Los Angeles as president at the Association's annual meeting in June, 1961, at New York City.

The A. M. A. 1960 Distinguished Service Award, one of medicine's highest honors, was given to Dr. Charles A. Doan, who will retire next year as dean of the Ohio State University College of Medicine and director of the Health Center in Columbus, Ohio.

Total registration through Thursday, with half a day of the meeting still remaining, had reached 19,107, including 8,706 physicians.

Health Care For The Aged

After considering a variety of reports, resolutions and comments on the subject of health care for the aged, the House of Delegates adopted the following statement as official policy of the American Medical Association:

> Personal medical care is primarily the responsibility of the individual. When he is unable to provide this care for himself, the responsibility should properly pass to his family, the community, the county, the state, and only when all these fail, to the federal government, and then only in conjunction with the other levels of government, in the above order. The determination of medical need should be made by a physician and the determination of eligibility should be made at the local level with local administration

This report was forwarded to the JOURNAL by Dr. Elias Faison of Charlotte, Secretary of the North Carolina delegates to the A.M.A.

and control. The principle of freedom of choice should be preserved. The use of tax funds under the above conditions to pay for such care, whether through the purchase of health insurance or by direct payment, provided local option is assured, is inherent in this concept and is not inconsistent with previous actions of the House of Delegates of the American Medical Association.

The House also urged the Board of Trustees "to initiate a nonpartisan open assembly to which all interested representative groups are invited for the purpose of developing the specifics of a sound approach to the health service and facilities needed by the aged, and that thereafter the American Medical Association present its findings and positive principles to the people."

In connection with an educational program regarding the aged, the House declared that "the American Medical Association increase its educational program regarding employment of those over 65, emphasizing voluntary, gradual and individual retirement, thereby giving these individuals not only the right to work but the right to live in a free society with dignity and pride."

Earlier, at the opening session, Dr. Louis M. Orr, retiring A. M. A. president, had asked the House to go on record favoring more jobs for the aged, voluntary retirement and a campaign against discrimination because of age, whether it be 40 or 65. The House also gave wholehearted approval to Dr. Askey's urging that state medical societies take an active part in state conferences and other planning activities preceding the January, 1961, White House Conference on Aging.

Pharmaceutical Issues

In the pharmaceutical area the House took two actions—one regarding mail order drug houses and the other involving the development and marketing of pharmaceutical products.

The House agreed with representatives of the pharmacy profession that the unorthodox practice of mail order filling of prescription drugs is not in the best interest of the patient, except where unavoidable because of geographic isolation of the patient. The statement pointed out that in this process the direct personal relationship, which exists between the patient-physician-pharmacist at the community level and which is essential to the public health and the welfare of patients, is lost.

The House also directed the Board of Trustees to request the Council on Drugs and other appropriate Association councils and committees "to study the pharmaceutical field in its relationship to medicine and the public, to correlate available material, and after consultation with the several branches of clinical medicine, clinical research, and medical education and other interested groups or agencies, submit an objective appraisal to the House of Delegates in June, 1961." The statement pointed out that certain proposals have been made which, if carried out, might impair the future of pharmaceutical research and development, thus retarding the progress of scientific therapy. It also said that the services of the pharmaceutical industry are so vital to the public and to the medical profession that an objective study should be made.

Occupational Health Programs

The House approved a revised statement on the "Scope, Objectives and Functions of Occupational Health Programs," which was originally adopted in June, 1957. The new statement contains no fundamental alterations in A. M. A. policy or ethical relationships, but it adds important new material on the following points:

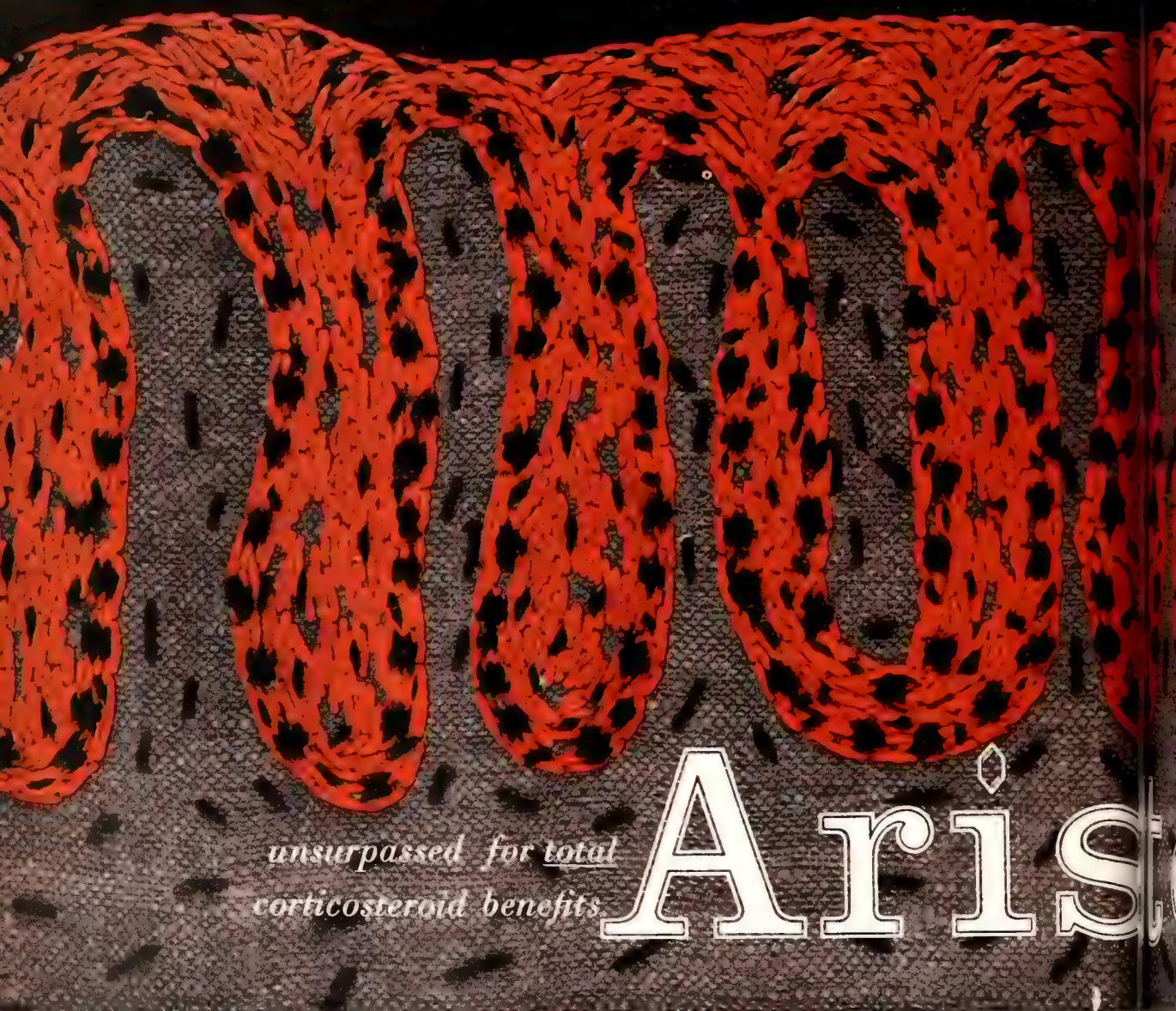
1. Greater emphasis on the preventive and health maintenance concepts of occupational health programs.
2. A more positive statement of organized medicine's obligation to provide leadership in improving occupational health services by part-time physicians in small industry.
3. Increased emphasis on rehabilitation of the occupationally ill and injured.
4. Inclusion of the proper use of immunization procedures for employes, as approved by the House in 1959.
5. A more adequate statement on the need for teamwork with lay industrial hygienists in tailoring each occupational health program to the particular employe group involved.

In approving the revised guides for occupational health programs, the House also accepted a suggestion that the A. M. A. Council on Occupational Health undertake



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5,000	5,000 to 10,000	50.00 Weekly	$ 78.00	$ 39.50	$104.00	$ 52.50
5,000	7,500 to 15,000	75.00 Weekly	114.00	57.50	152.00	76.50
5,000	10,000 to 20,000	100.00 Weekly	150.00	75.50	200.00	100.50
5,000	12,500 to 25,000	125.00 Weekly	186.00	93.50	248.00	124.50
5,000	15,000 to 30,000	150.00 Weekly	222.00	111.50	296.00	148.50

*Amount payable depends upon the nature of the loss as set forth in the policy.

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Allied Health Groups

The House approved the final report of the Committee to Study the Relationships of Medicine with Allied Health Professions and Services and commended it as " a monumental work." The report covers the present situation, future implications and recommendations, including guiding principles and approaches to activate physician leadership. The House strongly recommended that A. M. A. activity in this vitally important area be continued, and it approved the appointment of a Board of Trustees committee to carry on the work.

To develop physician leadership in promoting cooperative efforts with allied health professions and services, the report suggested the following A. M. A. activities.

1. A general conference should be held with allied scientists in the basic medical sciences and related disciplines for discussion of matters of common concern related to the creation of permanent, cooperative activities.
2. Specific exploratory conferences should be held with members of segments of science allied to a given area of medical practice with the national medical organizations concerned.
3. General and specific conferences should be held with professional and technical assistants on education, recruitment, and coordination of contributions.
4. Through meetings and publications, reciprocal exchange of information should be provided between physicians and allied scientists and members of health professions.
5. Effective, continuing liaison should be established between A. M. A. representatives and professional and technical personnel.

National Foundation

The House took two actions involving relations between the medical profession and the National Foundation. It adopted a statement of policies for the guidance of state medical associations and recommended that they be adopted by all component medical societies. These policies cover such subjects as membership of medical advisory committees, and basic principles concerning financial assistance for medical care, payment for physicians' services and physicians' responsibilities for constructive leadership in medical advisory activities.

In another action the House directed the Board of Trustees to authorize further conferences with leaders in the National Foundation on the problem of poliomyelitis as it relates to the betterment of the public health and to consider further joint action toward the eradication of polio. The House commended the National Foundation for its outstanding service in the attack against polio, but pointed out that much work remains to be done in public education, vaccination, continuing assistance for polio victims, and research.

Miscellaneous Actions

In dealing with reports and resolutions on a wide variety of other subjects, the House also:

Strongly reaffirmed its support of the *Blue Shield concept* in voluntary health insurance and approved specific recommendations concerning A. M. A.—Blue Shield relationships;

Approved a contingent appointment of not more than six months for *foreign medical school graduates* who have been accepted for the September, 1960, qualification examination;

Agreed that the American Medical Association should sponsor a *second National Congress on prepaid health insurance*;

Approved a Board of Trustees request to the Postmaster General for a stamp commemorating the *Mayo Brothers;*

Decided that the establishment of a home for *aged and retired physicians* is not warranted at this time.

Approved the establishment of a new *"Scientific Achievement Award"* to be given to a non-physician scientist on special occasions for outstanding work;

Approved the following schedule for future *annual meetings*: Atlantic City, 1963; San Francisco, 1964, and New York City, 1965;

Approved the objectives of the A. M. A. *Commission on the Cost of Medical Care* established by the Board of Trustees and headed by Dr. Louis M. Orr, immediate past president of the Association;

Urged individual members of the Association to take a greater interest and more

active part in *public affairs* on all levels;

Reaffirmed its opposition to compulsory inclusion of physicians under Title II of the *Social Security* Act and recommended immediate action by all A. M. A. members who agree with that position;

Called for a review of existing and proposed legislation pertaining to *food and color additives*, with the objection of supporting appropriate measures which are in the public interest;

Urged reform of the *federal tax structure* so as to return to the states and their political subdivisions, their traditional revenue sources;

Asked state and county medical societies to make greater use of A. M. A. *recruitment materials* in presenting medicine's story to the nation's high schools;

Requested the Board of Trustees to initiate a study of present policy regarding the required content and method of preparing *hospital records*;

Commended the Department of Defense and the Air Force for establishing and operating the *Aeromedical Transport Service* and urged that it be maintained at optimum efficiency;

Directed the Board of Trustees to develop *group annuity* and *group disability* insurance programs for Association members; and

Expressed grave concern over the indiscriminate use of *contact lenses*.

Addresses and Awards

Dr. Orr, in his final report to the House at the opening session, urged medical societies to "adopt" rural villages, cities, and regions in underdeveloped parts of the world and to send them medical, clinical, and hospital supplies.

Dr. Askey, in his inaugural address Tuesday night, declared that medicine faces its greatest challenge in the decade ahead, adding that physicians must prove the effectiveness of medicine practiced in a free society. Dr. John S. Millis (Ph.D.), president of Western Reserve University, Cleveland, Ohio, and guest speaker at the inaugural ceremonies, said the human dilemma of the sixties is an increasing desire for security and authority with a diminishing desire for responsibility.

At the Wednesday session of the House, Dr. Askey urged intensified, accelerated effort in five areas — medical education, preparations for the White House Conference on Aging next January, health insurance and third party relationships, mental health, and membership relations.

The Goldberger Award in Nutrition was presented to Dr. Richard Vilter of the University of Cincinnati. The Boy Scouts of America, celebrating its golden jubilee, presented the A. M. A. with a citation in appreciation of the medical profession's help and support. Dr. B. E. Pickett of Carrizo Springs, Texas, retiring chairman of the Council on Constitution and Bylaws, received an award in recognition of his long service.

Election of Officers

In addition to Dr. Larson, the new president-elect, the following officers were named at the Thursday session:

Dr. William F. Costello of Dover, N. J., vice president; Dr. Norman A. Welch of Boston, re-elected speaker of the House, and Dr. Milford O. Rouse of Dallas, Texas, re-elected vice speaker.

Dr. Gerald D. Dorman of New York City was elected to the Board of Trustees to succeed Dr. Larson, and Dr. James Z. Appel of Lancaster, Pennsylvania, was re-elected to the Board.

Elected to the Judicial Council, to succeed Dr. Louis A. Buie of Rochester, Minnesota, was Dr. James H. Berge of Seattle.

Named to the Council on Medical Education and Hospitals were Dr. William R. Willard of Lexington, Kentucky, succeeding Dr. James M. Faulkner of Cambridge, Massachusetts, and Dr. Harlan English of Danville, Illinois, who was re-elected.

On the Council on Medical Service, the House re-elected Dr. Russell B. Roth of Erie, Pennsylvania, and Dr. Hoyt B. Woolley of Idaho Falls.

Dr. George D. Johnson of Spartanburg, S. C., was named to succeed Dr. Pickett on the Council on Constitution and Bylaws.

F. J. L. BLASINGAME, M.D.
Executive Vice President
American Medical Association

North Carolina Medical Journal

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JULY, 1960

THE A.M.A.'s ONE HUNDRED NINTH ANNUAL MEETING

The actions of the A.M.A. House of Delegates are published elsewhere in this issue, so only a few random impressions will be given here.

The total registration was 22,484, including 8,162 physicians. This was far below last year's Atlantic City mark of 32,882, including 13,143 physicians. Doubtless the strike of Eastern Airline pilots called just before the opening day of the meeting was partly responsible for this falling off in attendance. Without disparaging the hospitality of the Florida medical profession, however, it must be admitted that Miami Beach was far from an ideal convention site. The distance from the headquarters hotel, the Americana, to the exhibition hall was 7 miles and required 45 minutes or more on one of the buses provided for transportation. The section meetings were widely scattered, and many doctors were heard to express the same nostalgic feeling for Atlantic City that members of our State Society had expressed for Pinehurst.

The scientific and technical exhibits were good, although not as well attended as they would have been in a more favorable location. Both Dr. Orr in his farewell address and Dr. Askey in his inaugural address did themselves proud.

The election of Dr. Leonard Larson as president-elect met with universal approval. He has richly earned this honor and can be depended upon to carry on the good work of his predecessors.

Our neighboring state, South Carolina, was well recognized. Dr. Julian Price of Florence was selected chairman of the Board of Trustees to succeed Dr. Larson. Dr. George Johnson of Spartanburg was elected to succeed Dr. B. E. Pickett of Texas as a member of the Council on Constitution and By-laws. Dr. Pickett was given a standing ovation when he gave his final report as chairman of this important Council.

* * *

THE OLD ORDER CHANGETH

Dr. Alfred Potter's Presidential Address, delivered at the one hundredth forty-ninth Annual Meeting of the Rhode Island Medical Society and published in the June issue of the *Rhode Island Medical Journal*, is scholarly and thought-provoking. As the one hundredth president of the Rhode Island Society, Dr. Potter noted some of the most important changes in medical practice that have occurred in the society's history.

He began by citing the record from the Providence Lying-In Hospital of a patient delivered by the matron. Since, fortunately for the patient, "Because of the Sunday horsecar delay the doctor was not present . . . The patient's course was remarkable in that at no time had the temperature risen above 100." At that time the words of Holmes and Semmelweiss had fallen on deaf ears.

Dr. Potter commented that the economics of medicine had changed as much as our mode of transportation and our therapy. More and more people depend on insurance, and the depression era 5 to 1 ratio of service to private patient has been reversed. With the great increase in insurance, fees for medical service are being standardized. Dr. Potter deplores "the leveling of all doctors to a median payment" as "leading

only to a dead level of mediocrity." He equally deplores, however, overcharging patients, and is concerned because "it seems that of late years more persons than formerly have entered medicine for financial betterment or for status."

Two paragraphs deserve quoting in full:

> The infrequent overcharging or other wrongdoing in the way of unprofessional conduct by a few brings discredit on all. To minimize this situation we must be more than ever alert to police our own profession. The general public seems ready to believe the worst of us, without waiting to have the evidence presented and proved. From the very nature of our calling, the fact that we are usually employed only at a time of illness, suffering, anxiety, or grief, all unpleasant emotions, makes us by association the objects of unconscious disapproval and hostility. Enricus Cordus expressed this common feeling as far back as 1535 in these lines:
>
> "Three faces wears the doctor; when first sought,
> An Angel's, . . . And a God's the cure half wrought;
> But when the cure complete, he seeks his fee,
> The Devil looks less terrible than he."
>
> I believe that a large part of the hostility toward medicine, outspoken by labor leaders, and rampant in many newspapers, is based on envy; envy of the doctor's independence. "We few, we happy few, we band of brothers" are of the few remaining self-employed. We are not retired at an arbitrarily fixed age while still fully or even better able to continue working. We may work as long and as many hours as we want or as our health permits. Having proved our competence to practice we are not displaced by changing production methods or economic upheavals. We have security, but only if we keep our health and maintain and enlarge our skills with new knowledge. In a way we live dangerously, with no pension plans paid for by an employer. But we are our own masters, and I believe that for this reason we are envied by our detractors. At the same time, it is important to remember that this freedom carries with it great responsibilities.

Dr. Potter found some comfort, after he had almost finished writing his address, from reading in the 1912 Presidential Address of Dr. Frederick Rogers:

"How shall we regain the respect, the feeling of security and confidence in the medical profession which was such a strong factor in human life a hundred years ago, but which now is unfortunately lacking?"

And it is quite likely that a hundred years before Dr. Rogers asked this question, the more sensitive and intelligent leaders of the profession were still smarting from the caricature of doctors found in Molière's writings and in Hogarth's paintings. Now, as then, our profession's most effective public relations can, in Dr. Potter's concluding words, "best be regained and maintained by our individual and personal contacts with our patients and other laymen."

* * *

"SYMPTOMATIC MEDICINE"

"Symptomatic medicine" has acquired the reputation of poor medicine, of the dispensing of a series of pills to relieve a succession complaints in a patient with an undiagnosed or incurable illness. It is generally referred to apologetically by the doctor in charge of the case, or condescendingly or scathingly by another doctor reviewing the case. Is such an attitude justified? Why should not the patient's symptoms be relieved?

The present century, because of the astounding advances in diagnostic techniques and in surgical and pharmacologic methods of cure, has witnessed a change in the goal of the medical profession. Cure of the disease, or, if that is not possible, restoration of maximum function is now the aim, rather than alleviation of suffering while the disease runs its course in the patient. It is true that if the disease is properly diagnosed, and if a specific remedy is available and properly prescribed, then the symptoms caused by the disease will abate and eventually disappear as the disease is healed, and a change in the symptoms may be a useful gauge of the progress of the treatment.

But what of the many symptoms caused by "stress" or "tensions" or by unknown disorders? The patient may obtain some relief by learning that his headache is caused by tension or sinusitis rather than the brain tumor he feared, but he will still expect some more direct relief while awaiting the benefits of measures directed toward the underlying condition. If such relief is not forthcoming, the less tolerant or less patient patient will seek help elsewhere—

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which explains why the quack and cultist still flourish in this age of medical miracles.

One other point should be made. It is often thought that "symptomatic medicine" is easy—that the relief of a symptom involves a thorough grounding not only in physiology but also in the psychology of the doctor as well as the patient, and prescribing for the symptoms presupposes an up to date knowledge of pharmacology.

The relief of symptoms is still the principal desire of patients coming to the physician. There should be no shame or stigma attached to granting such relief, provided the cause of the symptoms is understood. For a remarkably lucid and complete exposition on this subject the interested reader is referred to Dr. Walter Modell's monograph.[1]

1. Modell, Walter: The Relief of Symptoms, Philadelphia, W. B. Saunders Company, 1955.

* * *

NURSES AND NURSING

No doubt many doctors will say a hearty "Amen" to Miss Vivian Culver's paper in this issue of the *Journal*. Many nurses, also, have been concerned about the trend in nursing education to emphasize the theory of nursing at the expense of patient care. As Miss Culver expressed it, we are short of both nurses and nursing.

It is true that more and more nurses are expected to carry out procedures formerly done only by doctors—such as taking blood pressures. Parenthetically, this plan has the great advantage that nursing ministrations are so taken for granted by the average patient that almost as a rule the pressures taken by the nurse are lower than those taken by the doctor.

There has been a regrettable tendency to exalt the administrative role of the nurse at the expense of the active nursing care of the patient. Both types of nurses are needed, and both are important. The nurse who really enjoys patient care, however, should not be made to feel inferior to the supervisor type.

What the late Francis Peabody said of the medical practice applies equally well to nursing: "The secret of the care of the patient is caring for the patient."

MEDICAL PREPAYMENT AND OUR SOCIAL PHILOSOPHY

"A curious paradox of some contemporary social philosophy is the idea that man should spend what he earns for his pleasures rather than for what he needs. It is appropriate, so this reasoning goes, that he should buy a television set, a vacation in Florida or an outboard motor boat, because there are cardinal rights. But for something that he really needs, such as his life or his health, or the life of his child, someone else should pay. This may be the Government, his employer, his union, his great-aunt or anyone else who can be cajoled or coerced into paying the price for him. If no one else will pay for it, the doctor should serve him for nothing."

This observation by Dr. C. Marshall Lee, Jr.,[1] raises a question of crucial importance not only to the medical economy but to the whole pattern of our American society.

For, as Dr. Lee puts it, the attitude he describes "may be acceptable for the child of an indulgent parent, but it is not appropriate for a free man in a free society."

What can the doctor do to counteract this philosophy and to forestall the socialization of medicine which may be its ultimate product?

First, the doctor should learn all he can learn about our voluntary medical prepayment programs. Physicians should recognize that, in Dr. Lee's words, "Far from being the meddlesome 'third party' for which they have an uneasy fear, (the prepayment program) stands with them in the common effort to preserve a cherished concept of freedom."

Secondly, the doctors—and only he—can make these programs operate to the satisfaction of the patient. Only he can see to it that the subscriber gets full value for the premium dollar he has invested in our voluntary medical care program.

Finally, the medical profession's own sponsored Blue Shield Plans offer the American doctor an opportunity not only to strengthen and confirm his patient's confidence in our traditional way of practicing medicine, but also to participate actively in guiding the destiny of our medical prepayment program in the days ahead.

CORRESPONDENCE

To the Editor:

Recently I received from the Board of Medical Examiners of the State of North Carolina a pamphlet listing the registered physicians in the state of North Carolina. Although I did not count the exact number registered I estimated that approximately five thousand physicians were registered in this pamphlet. It appears that the intake from this project is amounting to over $25 thousand.

In the foreword in this pamphlet the Board of Medical Examiners of the State are nice enough to give an exact copy of the law wherein this taxation is ordered. However, I do not read in the law as published any direction wherein money will be spent from this collection to publish and mail out a pamphlet such as I have received. As I am a member of the North Carolina Medical Society I find that the roster which is published by the Society is much more convenient and comprehensive as to the information on doctors in North Carolina. In fact, the pamphlet as put out by the Board of Medical Examiners is grossly lacking in the information and consequently will serve no purpose due to the fact that the roster published by the Medical Society is better.

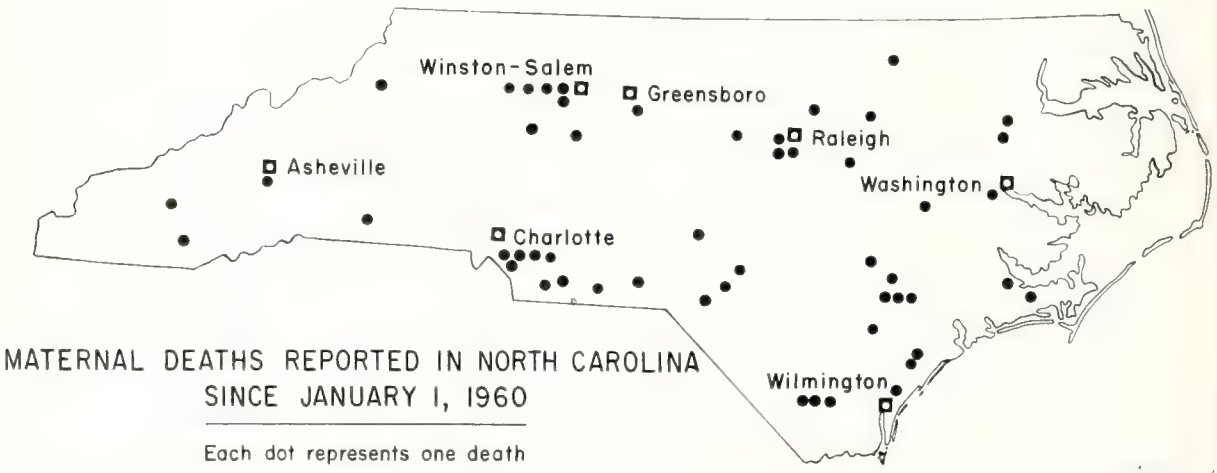
How many years will the physicians of North Carolina have to be bled for $25 thousand or more every two years for them to finally realize that this is just another unnecessary taxation placed upon them?

I sincerely hope that you will take some steps to bring this matter before the membership of the North Carolina Medical Society in an effort to get them to voice their feeling on this taxation and to take a firm stand on its approval or disapproval. If the consensus is toward approval then it should be so stated. If the voice is for disapproval then I think the Medical Society JOURNAL should be the place for the beginning of a campaign to have this law removed with all expediency.

The internal revenue department knows the physicians of the state, the military knows the names of the physicians it may need, the North Carolina Medical Society has a roster of its members, the North Carolina Board of Medical Examiners now have a complete list of the physicians of the state, so now, who can defend the perpetuation of this unfair and unnecessary piece of legislation?

J. R. GAMBLE, JR., M.D.
Lincolnton

Note: The Biennual Registration Act was recommended after long deliberation by the Board of Medical Examiners, and adopted by a large majority of the delegates at its 1956 meeting. The reasons for it were given by Dr. Combs in a guest editorial in the December, 1957, issue. Since the NORTH CAROLINA MEDICAL JOURNAL is the official organ of the North Carolina Medical Society, it would not be consistent for it to lead a crusade against a policy approved by a majority of our House of Delegates. The columns of the JOURNAL, however, are open to any members who wish to give their views on this or any other action of the Society.—*Ed.*



Committees and Organizations

SCHEDULE OF COMMITTEE AND COMMISSION APPOINTMENTS, 1960-1961

NOTE: The Committees listed herein have been authorized by President Amos N. Johnson, and/or are required under the Constitution and By-Laws.

Particular note should be taken of the authorization of the House of Delegates of a Commission form of organizational activity and that all Committees, excepting Committee on Nomination, Committee on Negotiation, and Committee on Grievances, are segregated under the respective Commission in which the function of the committee logically rests. This will tend to eliminate overlapping and duplication in activity programs and result in coordination of the work of the Society in a manner to lessen the work of the delegates in the Annual Meeting of the House of Delegates.

(The President, Secretary and Executive Director of the Society are ex-officio members of all committees and, along with the Commission Chairman, should receive notice of meetings, agenda and minutes of committee meetings during the activity year.)

I. ADMINISTRATION COMMISSION
Wayne J. Benton, M.D., *Chairman*
2320 Battleground Rd. Committee
Greensboro, North Carolina listing

1. **Finance, Committee on (I-1)** #19
Wayne J. Benton, M.D., *Chairman*
2320 Battleground Rd.
Greensboro, North Carolina.

2. **Liaison to Study Integration of Negro Physicians into Medical Society of State of North Carolina** #44
J. Street Brewer, M.D., *Chairman*
P.O. Box 98
Roseboro, North Carolina

II. ADVISORY AND STUDY COMMISSION
Jacob H. Shuford, M.D., *Chairman*
7 Main Avenue Place, S. W.
Hickory, North Carolina

1. **Auxiliary Advisory and Archives of Medical Society History, Committee on, (II-1)** #1
Roscoe D. McMillan, M.D., *Chairman*
P. O. Box 232
Red Springs, North Carolina

2. **American Medical Education Foundation, Committee on, (II-2)** #2
Ralph B. Garrison, M.D., *Chairman*
222 N. Main Street
Hamlet, North Carolina

3. **Blue Shield, Committee on (II-3)** #8
Jacob H. Shuford, M.D., *Chairman*
7 Main Avenue Place, S. W.
Hickory, North Carolina

4. **Constitution and By-Laws, Committee on, (II-4)** #13
Roscoe D. McMillan, M.D., *Chairman*
Box 232
Red Springs, North Carolina

5. **Credit Bureau, Committee on Medical, (II-5)** #14
W. Howard Wilson, M.D., *Chairman*
403 Professional Building
Raleigh, North Carolina

6. **Industrial Commission of North Carolina Committee to Work with, (II-6)** #23
Thomas B. Dameron, Jr., M.D., *Chairman*
1313 Daniels Street
Raleigh, North Carolina

7. **Medical Care of Dependents of Members of Armed Forces, (MEDICARE) Committee on, (II-7)** #28
David M. Cogdell, M.D., *Chairman*
911 Hay Street
Fayetteville, North Carolina

8. **Student A.M.A. Chapters, Committee Advisory to, (II-8)** #41
John P. Davis, M.D., *Chairman*
821 Nissen Building
Winston-Salem, North Carolina

III. ANNUAL CONVENTION COMMISSION
R. Beverly Raney, M.D., *Chairman*
North Carolina Memorial Hospital
Chapel Hill, North Carolina

1. **Arrangements, (of Facilities Annual Session), Committee on, (III-1)** #4
John S. Rhodes, M.D., *Chairman*
700 West Morgan Street
Raleigh, North Carolina

2. **Audio-Visual Scientific Postgraduate Instruction, Committee on, (III-2)** #5
J. Leonard Goldner, M.D., *Chairman*
Duke Hospital
Durham, North Carolina

3. **Awards, Committee on, (III-3)** #6
To be announced in Fall

4. **Delegates, Committee on Credentials to House of Delegates (III-4)** #15
T. Tilghman Herring, M.D., *Chairman*
Wilson Clinic
Wilson, North Carolina

5. **Exhibits, Committee on Scientific, (III-5)** #17
Raphael W. Coonrad, M.D., *Chairman*
Broad & Englewood
Durham, North Carolina

6. **Golf Tournament, Committee on Medical (III-6)** #21
Wm. A. Brewton, M.D., *Chairman*
5 Lake Dr.
Enka, North Carolina

7. **Scientific Works, Committee on (III-7)** #7
Wm. McN. Nicholson, M.D., *Chairman*
Duke Hospital
Durham, North Carolina

IV. PROFESSIONAL SERVICE COMMISSION
George W. Paschal, Jr., M.D., *Chairman*
1110 Wake Forest Rd.
Raleigh, North Carolina

1. **Emergency Medical and Military Service Committee on (IV-1)** #16
George W. Paschal, Jr., M.D., *Chairman*
1110 Wake Forest Rd.
Raleigh, North Carolina

2. **Eye Care and Eye Bank, Committee on (IV-2)** #18
George T. Noel, M.D., *Chairman*
211 Raleigh Building
Kannapolis, North Carolina

3. **Insurances, Committee on, (IV-3)** #24
Joseph W. Hooper, Jr., M.D., *Chairman*
410 North 11th Street
Wilmington, North Carolina

4. **Necrology, Committee on, (IV-4)** #30
Charles H. Pugh, M.D., *Chairman*
Box 527
Gastonia, North Carolina

5. **Nursing, Committee of Physicians on, (IV-5)** #33
Robert R. Cadmus, M.D., *Chairman*
N. C. Memorial Hospital
Chapel Hill, North Carolina

6. **Postgraduate Medical Study, Committee on (IV-6)** #35
Samuel L. Parker, Jr., M.D., *Chairman*
Kinston Clinic
Kinston, North Carolina

V. PUBLIC RELATIONS COMMISSION

Hubert Mc.N. Poteat, Jr., M.D., *Chairman*
713 Wilkins Street
Smithfield, North Carolina

1. **Hospital and Professional Relations and Liaison to North Carolina Hospital Association, Committee on (V-1)** #22
Theodore H. Mees, M.D., *Chairman*
501 West 27th Street
Lumberton, North Carolina

2. **Legislation, Committee on, (V-2)** #25
Hubert McN. Poteat, Jr., M.D., *Chairman*
713 Wilkins Street
Smithfield, North Carolina

3. **Medical-Legal Committee (V-3)** #27
Julius A. Howell, M.D., *Chairman*
Bowman Gray School of Medicine
Winston-Salem, North Carolina

4. **Public Relations, Committee on (V-4)** #37
Edgar T. Beddingfield, Jr., M.D., *Chairman*
P. O. Box 137
Stantonsburg, North Carolina

5. **Rural Health and General Practitioner Award, Committee on (V-5)** #39
R. Vernon Jeter, M.D., *Chairman*
Plymouth Clinic
Plymouth, North Carolina

6. **Insurance Industry Liaison Committee** #13
Frank W Jones, M.D., *Chairman*
Catawba Hospital
Newton, North Carolina

VI. PUBLIC SERVICE COMMISSION

John R. Kernodle, M.D., *Chairman*
Kernodle Clinic
Burlington, North Carolina

1. **Anesthesia Study, Committee on, (VI-1)** #3
David A. Davis, M.D., *Chairman*
North Carolina Memorial Hospital
Chapel Hill, North Carolina

2. **Board of Public Welfare of North Carolina, Committee Advisory to, (VI-2)** #9
J. Street Brewer, M.D., *Chairman*
P. O. Box 98
Roseboro, North Carolina

3. **Cancer, Committee on, (VI-3)** #10
James F. Marshall, M.D., *Chairman*
310 West 4th Street
Winston-Salem, North Carolina

4. **Child Health, Committee on, (VI-4)** #11
Angus M. McBryde, M.D., *Chairman*
809 West Chapel Hill Street
Durham, North Carolina

5. **Chronic Illness, Tuberculosis and Heart Disease, Committee on, (VI-5)** #12
John R. Kernodle, M.D., *Chairman*
Kernodle Clinic
Burlington, North Carolina

6. **Maternal Health, Committee on, (VI-6)** #26
James F. Donnelly, M.D., *Chairman*
State Board of Health
Raleigh, North Carolina

7. **Mental Health, Committee on, (VI-7)** #29
Allyn B. Choate, M.D., *Chairman*
1012 Kings Drive
Charlotte, North Carolina

8. **Occupational Health, Committee on, (VI-8)** #34
Harry L. Johnson, M.D., *Chairman*
P. O. Box 530
Elkin, North Carolina

9. **Poliomyelitis, Committee on, (VI-9)** #36
Samuel F. Ravenel, M.D., *Chairman*
104 E. Northwood Street
Greensboro, North Carolina

10. **Rehabilitation Physical, Committee on (VI-10)** #38
George W. Holmes, M.D., *Chairman*
2240 Cloverdale Avenue
Winston-Salem, North Carolina

11. **School Health, Committee on, (VI-11)** #40
Irma C. Henderson Smathers, M.D., *Chairman*
1295 Merrimon Avenue
Asheville, North Carolina

12. **Veterans Affairs, Committee on, (VI-12)** #42
Samuel L. Elfmon, M.D., *Chairman*
225 Green Street
Fayetteville, North Carolina

VII. NOMINATIONS, COMMITTEE ON (not commission constitutionally provided) #32
Jacob H. Shuford, M.D., *Chairman*
7 Main Ave. Place, S.W.
Hickory, North Carolina

VIII. GRIEVANCES, COMMITTEE ON, (not a commission By-Law provided) #20
James P. Rousseau, M.D., *Chairman*
1014 W. Fifth Street
Winston-Salem, North Carolina

IX. NEGOTIATIONS, COMMITTEE ON, (not a commission By-Law provided) #31
Wm. F. Hollister, M.D., *Chairman*
Moore County Hospital
Pinehurst, North Carolina

1. **Committee Advisory to the Auxiliary and Archives of Medical Society History (14) II-1**
Roscoe D. McMillan, M.D., *Chairman*, Box 232, Red Springs
Ethel May Brownsberger, M.D., 75 Hendersonville Road, Biltmore
Warner L. Wells, M.D., Consultant, N. C. Memorial Hospital, Chapel Hill
Coy C. Carpenter, M.D., Consultant, Bowman Gray, Winston-Salem
Wilburt C. Davison, M.D., Consultant, Roaring Gap
Joseph M. Hitch, M.D., 415 Professional Bldg., Raleigh
Wingate M. Johnson, M.D., 300 S. Hawthorne Road, Winston-Salem
Rose Pully, M.D., 1007½ N. College Street, Kinston
Ivan M. Procter, M.D., 209 Hillcrest Road, Raleigh
Jean Bailey Brooks, M.D., 1100 N. Elm Street, Greensboro
James P. Rousseau, M.D., 1014 West Fifth Street, Winston-Salem
Ben F. Royal, M.D., 900 Shepherd Street, Morehead City
James Tidler, M.D., 1010 Grace Street, Wilmington
Paul F. Whitaker, M.D., 1205 N. Queen Street, Kinston

2. **Committee on American Medical Education Foundation (AMEF) (7) II-2**
Ralph B. Garrison, M.D., *Chairman*, 222 N. Main Street, Hamlet
Wm. LeRoy Fleming, M.D., UNC School of Medicine, Chapel Hill
J. Bivins Helms, M.D., Box 24, Morganton
Harry L. Johnson, M.D., Box 530, Elkin
Paul F. Maness, M.D., 328 W. Davis Street, Burlington
Manson Meads, M.D., Bowman Gray, Winston-Salem
Wm. Pettway Peete, M.D., Duke Hospital, Durham

3. **Committee on Anesthesia Study Commission (11) VI-1**
David A. Davis, M.D., *Chairman*, N. C. Memorial Hospital, Chapel Hill
Beverly W. Armstrong, M.D., 106 W. 7th Street, Charlotte 2
John R. Ashe, Jr., M.D., 624-A. N. Church Street, Concord
Horace M. Baker, Jr., M.D., Medical Arts Building, Lumberton
Samuel R. Cozart, M.D., 122 S. Green Street, Greensboro
D. LeRoy Crandell, M.D., Bowman Gray, Winston-Salem
Joseph S. Hiatt, Jr., M.D., 208 S. W. Broad Street, Southern Pines
John R. Hoskins, III, M.D., 203 Doctors Bldg., Asheville
Will Camp Sealy, M.D., Duke Hospital, Durham
Charles R. Stephen, M.D., Box 3535, Duke Hospital, Durham
Thomas B. Wilson, M.D., Rex Hospital Laboratory, Raleigh

4. **Committee on Arrangements (3)—(plus 3 consultants) III-1**
John S. Rhodes, M.D., *Chairman*, 700 W. Morgan Street, Raleigh
Theodore S. Raiford, M.D., 301 Doctors Bldg., Asheville
Walter Spaeth, M.D., 116 South Road Street, Elizabeth City
George Gilbert, M.D., Consultant, 309 Doctors Bldg., Asheville
Robert S. Roberson, M.D., Consultant, 102 Brown Avenue, Hazelwood
Jack C. Horner, M.D., Consultant, 119 Hospital Drive, Spruce Pine

5. **Committee on Scientific Audio-Visual Postgraduate Instruction (10) III-2**
J. Leonard Goldner, M.D., *Chairman*, Duke Hospital, Durham
Lenox D. Baker, M.D., Duke Hospital, Durham
H. Frank Starr, M.D., Pilot Life Insurance Company, Greensboro
Gordon M. Carver, Jr., M.D., 1203 Broad Street, Durham
Joseph F. McGowan, M.D., 200 New Medical Bldg., Asheville
C. Glenn Sawyer, M.D., Bowman Gray, Winston-Salem
L. Everett Sawyer, M.D., 104 W. Colonial Avenue, Elizabeth City
J. O. Williams, M.D., Cabarrus Memorial Hospital, Concord
George T. Wolff, M.D., Co-Chairman, 135 Bishop Street, Greensboro
Warner L. Wells, M.D., N. C. Memorial Hospital, Chapel Hill

6. **Committee on Scientific Awards (10) III-3**
(to be announced in Fall)

7. **Committee on Scientific Works (III-7) (5)-(plus Section Chairmen as Consultants)**
Wm. McN. Nicholson, M.D., *Chairman*, Duke Hospital, Durham
Hubert McN. Poteat, Jr., M.D., 713 Wilkins Street, Smithfield
Paul F. Maness, M.D., 328 W. Davis Street, Burlington
George M. Cooper, Jr., M.D., 2111 Clark Avenue, Raleigh
George T. Wolff, M.D., 135 Bishop Street, Greensboro
Consultants: (1960-1961 Section Chairmen)
Julius Sader, M.D. (Gen. Practice of Medicine), 205 East Main Street, Brevard
Walter Spaeth, M.D. (Internal Medicine), 116 South Road Street, Elizabeth City
Charles W. Tillett, M.D., (Ophthal & Otol), 1511 Scott Avenue, Charlotte
James E. Davis, M.D. (Surgery), 1200 Broad Street, Durham
Wm. W. Farley, M.D. (Pediatrics), 903 W. Peace Street, Raleigh
Fleming Fuller, M.D., (Ob-Gyn), Kinston Clinic, Kinston
Isa C. Grant, M.D. (Pub Health & Ed), 3006 Warren Ave., Raleigh
Myron G. Sandifer, M.D. (N&P), N. C. Memorial Hospital, Chapel Hill
Roger W. Morrison, M.D. (Pathology), 65 Sunset Parkway, Asheville
Charles E. Whitcher, M.D. (Anesthesia), 300 Hawthorne Rd., Winston-Salem
Isadore Meschan, M.D. (Radiology), Bowman Gray, Winston-Salem
Chalmers R. Carr, M.D. (Ortho & Traumatology), 1822 Brunswick Avenue, Charlotte
Mr. John Feagin (Student AMA), Duke University School of Medicine, Durham

8. **Committee on Blue Shield (9) II-3**
Jacob H. Shuford, M.D., *Chairman* (1962), 7 Main Avenue Place, S. W., Hickory
W. Z. Bradford, M.D., (1961), 1509 Elizabeth Avenue, Charlotte
Willard C. Goley, M.D. (1962), 214 N. Market Street, Graham
William J. Cromartie, M.D. (1963), UNC School of Medicine, Chapel Hill
John R. Hoskins, III, M.D. (1963), 203 Doctors Bldg., Asheville
Julius A. Howell, M.D. (1961), Bowman Gray, Winston-Salem
John W. Morris, M.D., (1962), 1707 Arendell Street, Morehead City
E. Eugene Menefee, Jr., M.D. (1963), Duke Hospital, Durham
Max P. Rogers, M.D. (1961), 624 Quaker Lane, High Point

9. **Committee Advisory to North Carolina State Board of Public Welfare (9) VI-2**
J. Street Brewer, M.D., *Chairman*, Box 98 Roseboro
Bruce B. Blackmon, M.D., Buies Creek
Stephen R. Bartlett, Jr., M.D., 1001 E. 4th Street, Greenville
Allyn B. Choate, M.D., 1012 Kings Drive, Charlotte 2
Clyde R. Hedrick, M.D., 104 North Main Street, Lenoir
J. Kempton Jones, M.D., 1001 S. Hamilton Road, Chapel Hill
B. Bruce Langdon, M.D., 903 Hay Street, Fayetteville
Wm. Raney Stanford, M.D., 111 Corcoran Street, Durham
David G. Welton, M.D., 718 Professional Bldg., Charlotte 2

10. **Committee on Cancer (12) (Legal—1 each Congressional District) VI-3**
James F. Marshall, M.D., *Chairman*, 310 W. 4th Street, Winston-Salem
Wm. H. Bell, Jr., M.D. (3rd), P. O. Box 1580, New Bern
Joshua F. B. Camblos, M.D. (12th), 500 New Medical Bldg., Asheville
Charles I. Harris, Jr., M.D. (1st), Martin General Hospital, Williamston
Arthur B. Bradsher, M.D. (6th), 1200 Broad Street, Durham
Harry V. Hendrick, M.D. (11th), Rutherford Hospital, Rutherfordton
Harold A. Peck, M.D. (8th), Moore Memorial Hospital, Pinehurst
Charles Glenn Mock, M.D. (10th), 200 Hawthorne Lane, Charlotte
David L. Pressly, M.D. (9th), 1025 Davie Street, Statesville
Samuel L. Parker, Jr., M.D. (2nd), Kinston Clinic, Kinston
Hubert McN. Poteat, Jr., M.D. (4th), 713 Wilkins St., Smithfield
D. Ernest Ward, Jr., M.D. (7th), 304 Medical Arts Building, Lumberton

11. **Committee on Child Health (9) VI-4**
Angus M. McBryde, M.D., *Chairman*, 809 W. Chapel Hill Street, Durham
P. J. McElrath, M.D., 500 St. Mary's Street, Raleigh
Dan P. Boyette, Jr., M.D., 217 W. Main Street, Ahoskie
Harrie R. Chamberlin, M.D., UNC School of Medicine, Chapel Hill
Jean C. McAlister, M.D., 104 E. Northwood Street, Greensboro
John W. Nance, M.D., 401 Cooper Drive, Clinton
Wm. H. Patton, Jr., M.D., 305 College Street, Morganton
Robert L. Vann, M.D., Bowman Gray, Winston-Salem
Robert F. Poole, Jr., M.D., 817 Hillsboro Street, Raleigh

12. **Committee on Chronic Illness, Including Tuberculosis and Heart Disease (15) VI-5**
John R. Kernodle, M.D., *Chairman*, Kernodle Clinic, Burlington
Stephen R. Bartlett, Jr., M.D., 1001 E. 4th Street, Greenville
Robert H. Dovenmuehle, M.D., Duke Hospital, Durham
John D. Fitzgerald, M.D., 409 Roxboro Bldg., Roxboro
Robert L. Garrard, M.D., 800 North Elm Street, Greensboro
O. David Garvin, M.D., Health Department, Chapel Hill
Robert A. Gregg, M.D., Central Convalescent Hospital, Greensboro
Emery T. Kraycirik, M.D., Box 1153, Burlington
Daniel A. McLaurin, M.D., 118 Main Street, Garner
Thomas R. Nichols, M.D., 206 N. Sterling Morganton
Elbert L. Persons, M.D., Duke Hospital, Durham
John L. Shirey, M.D., 1 Battle Square, Asheville
George L. Verdone, M.D., 1012 Kings Drive, Charlotte
Donald D. Weir, M.D., N. C. Memorial Hospital, Chapel Hill
Wm. H. Flythe, M.D., 624 Quaker Lane, High Point

13. **Committee on Constitution and By-Laws (5) II-4**
Roscoe D. McMillan, M.D., *Chairman*, Box 232, Red Springs
Millard D. Hill, M.D., 15 W. Hargett Street, Raleigh
Edward W. Schoenheit, M.D., 46 Haywood Street, Asheville
G. Westbrook Murphy, M.D., 103 Doctors Bldg., Asheville
Louis deS. Shaffner, M.D., 300 S. Hawthorne Road, Winston-Salem

14. **Committee on Medical Credit Bureaus (7) II-5**
W. Howard Wilson, M.D., *Chairman*, 403 Professional Bldg., Raleigh
Fred K. Garvey, M.D., Bowman Gray, Winston-Salem
John R. Hoskins, III, M.D., 203 Doctors Bldg., Asheville
Bob Lewis Fields, M.D., Professional Bldg., Salisbury
Lockert B. Mason, M.D., 1006 Murchison Bldg., Wilmington
Ross S. McElwee, Jr., M.D., 1340 Romany Road, Charlotte
Ralph J. Sykes, M.D., 205 Rawley Avenue, Mt. Airy

15. **Committee on Credentials of Delegates to House of Delegates (5) III-4**
T. Tilghman Herring, M.D., *Chairman*, Wilson Clinic, Wilson
Milton S. Clark, M.D., Wachovia Bank Bldg., Goldsboro
James E. Hemphill, M.D., 1012 Kings Drive, Charlotte
Robert M. Whitley, M.D., 144 Coast Line Street, Rocky Mount
Charles B. Wilkerson, M.D., 100 S. Boylan Avenue, Raleigh

16. **Committee on Emergency Medical and Military Service (8) IV-1**
George W. Paschal, Jr., M.D., *Chairman*, 1110 Wake Forest Road, Raleigh
Chauncey L. Royster, M.D. Co-Chairman, 707 W. Morgan Street, Raleigh
Zackary F. Long, M.D., 304 E. Washington St., Rockingham
Leslie M. Morris, M.D., Medical Building, Gastonia
H. Mack Pickard, M.D., 7 N. 17th Street, Wilmington
Daniel N. Stewart, Jr., M.D., 3 Third Avenue, N. W., Hickory
Hugh F. McManus, Jr., M.D., 722 St. Mary's Street, Raleigh
George A. Watson, M.D., 306 S. Gregson Street, Durham

17. **Committee on Scientific Exhibits (7) III-5**
Raphael W. Coonrad, M.D., *Chairman*, Broad & Englewood Sts., Durham
Lenox D. Baker, M.D., Co-Chairman, Duke Hospital, Durham
Wm. Henry Boyce, M.D., Bowman Gray, Winston-Salem
Thomas B. Daniel, M.D., 700 W. Morgan Street, Raleigh
Erle E. Peacock, Jr., M.D., N. C. Memorial Hospital, Chapel Hill
O. Norris Smith, M.D., 1019 Professional Village, Greensboro
Vernon H. Youngblood, M.D., 609 Kannapolis Highway, Concord

18. **Committee on Eye Care and Eye Bank (8) IV-2**
George T. Noel, M.D., *Chairman*, 211 Raleigh Building, Kannapolis
Wm. Banks Anderson, M.D., Box 3802, Duke Hospital, Durham
Horace M. Dalton, M.D., 400 Glenwood Avenue, Kinston
Louten R. Hedgpeth, M.D., Medical Arts Building, Lumberton
George Levi, M.D., 802 Glenwood Drive, Fayetteville
Edward E. Moore, M.D., 706 Flatiron Bldg., Asheville
J. David Stratton, M.D., 1012 Kings Drive, Charlotte
George T. Thornhill, M.D., 720 W. Jones Street, Raleigh

19. **Committee on Finance (3) plus consultants I-1**
Wayne J. Benton, M.D., *Chairman*, 2320 Battleground Road, Greensboro
Lenox D. Baker, M.D., Duke Hospital, Durham
Arthur L. Daughtridge, M.D., Box 111, Rocky Mount
Alexander Webb, Jr., M.D., Consultant, 231 Bryan Bldg., Raleigh
Graham B. Barefoot, M.D., Consultant, Box 1198, Wilmington
Newsom P. Battle, M.D., Consultant, 404 Falls Road, Rocky Mount
Isaac E. Harris, Jr., M.D., Consultant, 1200 Broad Street, Durham
Donald B. Koonce, M.D., Consultant, 408 N. 11th Street, Wilmington
Malory A. Pittman, M.D., Consultant, Wilson Clinic, Wilson
James P. Rousseau, M.D., Consultant, 1014 West Fifth Street, Winston-Salem
O. Norris Smith, M.D., Consultant, 1019 Professional Village, Greensboro
Edward W. Schoenheit, M.D., Consultant, 46 Haywood Street, Asheville
John C. Reece, M.D., Consultant, Grace Hospital, Morganton
A. Hewitt Rose, Jr., M.D., Consultant, 2009 Clark Avenue, Raleigh

20. **Committee on Grievances (5) (1st Five Past Presidents) VIII-0**
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John C. Reece, M.D., Secretary, Grace Hospital, Morganton
Lenox D. Baker, M.D., Duke Hospital, Durham
Edward W. Schoenheit, M.D., 46 Haywood Street, Asheville
Donald B. Koonce, M.D., 408 N. 11th Street, Wilmington

21. **Committee on Medical Golf Tournament (3) III-6**
Wm. A. Brewton, M.D., *Chairman*, 5 Lake Drive, Enka
Ralph B. Garrison, M.D., 222 N. Main Street, Hamlet
Charles W. Styron, M.D., 615 St. Mary's Street, Raleigh

22. **Committee on Hospital and Professional Relations and Liaison to North Carolina Hospital Association (10) V-1**
Theodore H. Mees, M.D., *Chairman* (5th), 501 W. 27th Street, Lumberton
Quinton E. Cooke, M.D., (1st), 209 E. Main Street, Murfreesboro
Paul McNeely Deaton, M.D., (9th), 766 Hartness Road, Statesville
John Tyler Dees, M.D., (3rd), Box 248, Burgaw
Frederick C. Hubbard, M.D. (8th), Box 30, North Wilkesboro
H. Lee Large, Jr., M.D. (7th), Presbyterian Hospital, Charlotte
Arthur H. London, Jr., M.D. (6th), 306 S. Gregson Street, Durham
Wm. A. Farmer, M.D. (2nd), 103 Davis Street, Fayetteville
James S. Raper, M.D. (10th), Doctors Building, Asheville
Jack W. Wilkerson, M.D. (4th), Community Clinic, Stantonsburg

23. **Committee to Work with North Carolina Industrial Commission (6) II-6**
Thomas B. Dameron, Jr., M.D., *Chairman*, 1313 Daniels Street, Raleigh
Wm. F. Hollister, M.D., Moore County Hospital, Pinehurst
James S. Mitchener, Jr., M.D., Scotland County Memorial Hospital, Laurinburg
Guy L. Odom, M.D., Duke Hospital, Durham
Malory A. Pittman, M.D., Wilson Clinic Wilson
Charles T. Wilkinson, M.D., 205 Waite Street, Wake Forest

24. **Committee on Insurances (7) IV-3**
Joseph W. Hooper, Jr., M.D., *Chairman*, 410 N. 11th Street, Wilmington
Robert H. Brashear, Jr., M.D., N. C. Memorial Hospital, Chapel Hill
John C. Burwell, Jr., M.D., 1026 Professional Village, Greensboro
Barry F. Hawkins, M.D., Ardsley Road, Concord
Alban Papineau, M.D., Plymouth Clinic, Plymouth
Henry B. Perry, Jr., M.D., 344 North Elm Street, Greensboro
S. Glenn Wilson, M.D., Box 158, Angier

25. **Committee on Legislation (3 members plus President & Secretary) 10 Consultants) V-2**
Hubert McN. Poteat, Jr., M.D., *Chairman*-(National), 713 Wilkins Street, Smithfield
Lenox D. Baker, M.D., Duke Hospital, Durham
Edgar T. Beddingfield, Jr., M.D., Co-Chairman-(State), P. O. 137, Stantonsburg
Amos N. Johnson, M.D., President (Ex Officio), Garland
John S. Rhodes, M.D., Secretary (Ex Officio), 700 W. Morgan Street, Raleigh
Daniel S. Currie, Jr., M.D. (Consultant), 111 Bradford Avenue, Fayetteville
Joseph S. Holbrook, M.D., (Consultant), Davis Hospital, Statesville
Wm. E. Keiter, M.D. (Consultant) 400 Glenwood Avenue, Kinston
Donald B. Koonce, M.D. (Consultant), 408 N. 11th Street, Wilmington
Leslie M. Morris, M.D. (Consultant), Medica Building, Gastonia
Zack D. Owens, M.D. (Consultant), Medical Building, Elizabeth City
Robert Stuart Roberson, M.D. (Consultant), 102 Brown Avenue, Hazelwood
James P. Rousseau, M.D. (Consultant) 1014 West Fifth Street, Winston-Salem
Ben F. Royal, M.D. (Consultant), 907 Evans Street, Morehead City
Thomas B. Dameron, Jr., M.D. (Consultant), 1313 Daniels Street, Raleigh

26. **Committee on Maternal Health (14) VI-6**
James F Donnelly, M.D., *Chairman* (1966), State Board of Health, Raleigh
W. Joseph May, M.D., Secretary (8th), 121 Professional Bldg., Winston-Salem

Glenn E. Best, M.D., (3rd)-(1966), Main Street, Clinton
Jesse Caldwell, Jr., M.D., (7th)-(1961), 114 West Third Street, Gastonia
P. J. McElrath, M.D. (6th)-(1961), 500 St. Mary's Street, Raleigh
Milton S. Clark, M.D. (4th)-(1961), Wachovia Bank Bldg., Goldsboro
W. Otis Duck, M.D. (10th)-(1963), Box 387, Mars Hill
Wm. A. Hoggard, Jr., M.D. (1st)-(1965), 1502 Carolina Avenue, Elizabeth City
Wm. R. Wellborn, Jr., M.D. (9th)-(1964), 222 W. Union Street, Morganton
Frank R. Lock, M.D. (BG)-(1965), 300 S. Hawthorne Road, Winston-Salem
Hugh A. McAllister, M.D. (5th)-(1965), 27th at Barker St., Lumberton
Roy T. Parker, M.D. (Duke)-(1966), Box 3517, Duke Hospital, Durham
Robert A. Ross, M.D. (UNC)-(1963), N. C. Memorial Hospital, Chapel Hill
H. Fleming Fuller, M.D. (2nd)-(1963), Kinston Clinic, Kinston

27. **Medical-Legal Committee (7) V-3**
Julius A. Howell, M.D., *Chairman*, Bowman Gray, Winston-Salem
Theodore S. Raiford, M.D., 301 Doctors Bldg., Asheville
David G. Welton, M.D., 403 N. Tryon Street, Charlotte
John W. Foster, M.D., Veterans Administration, Winston-Salem
Connell G. Garrenton, M.D., Bethel Clinic, Bethel
June U. Gunter, M.D., Watts Hospital, Durham
Bennette B. Pool, M.D., 414 Nissen Building, Winston-Salem

28. **Committee on Medical Care Armed Forces Dependents ("MEDICARE") (13) (plus SubCommittee Consultants—19) II-7**
David M. Cogdell, M.D., *Chairman*, 911 Hay Street, Fayetteville
George A. Watson, M.D., 306 S. Gregson Street, Durham
Wm. H. Breeden, M.D., 1606 Morganton Road, Fayetteville
Everett I. Bugg, Jr., M.D., Broad and Englewood Sts., Durham
Jesse Caldwell, Jr., M.D., 114 W. Third Street, Gastonia
Daniel S. Currie, Jr., M.D., 111 Bradford Avenue, Fayetteville
Powell G. Fox, M.D., 1110 Wake Forest Road, Raleigh
Wm. F. Hollister, M.D., Moore County Hospital, Pinehurst
Donald B. Koonce, M.D., 408 N. 11th Street, Wilmington
J. Douglas McRee, M.D., 2109 Clark Avenue, Raleigh
Vernon L. Andrews, M.D., Box 407, Mt. Gilead
A. Ledyard DeCamp, M.D., 1505 Elizabeth Avenue, Charlotte
Donald H. Vollmer, M.D., 403 Doctors Bldg., Asheville
A.—General Medicine
John L. McCain, M.D., *Chairman*, Wilson Clinic, Wilson
B. Joseph Christian, M.D., 948 Walker Avenue, Greensboro
Leonard E. Fields, M.D., Box 788, Chapel Hill
Joseph M. Hitch, M.D., 415 Professional Bldg., Raleigh
B.—Radiology
James E. Hemphill, M.D., *Chairman*, 1012 Kings Drive, Charlotte
Joe Lee Frank, Jr., M.D., Roanoke-Chowan Hospital, Ahoskie
C.—Surgery
Wayne H. Stockdale, M.D., *Chairman*, 703 North Street, Smithfield
Howard M. Ausherman, M.D., 200 Hawthorne Lane, Charlotte
Fred K. Garvey, M.D., Bowman Gray, Winston-Salem
George R. Miller, M.D., 412 Realty Bldg., Gastonia
Guy L. Odom, M.D., Duke Hospital, Durham
C. F. Siewers, M.D., 201 Churchill Drive, Fayetteville
Larry Turner, M.D., 1110 W. Main Street, Durham
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R. Vernon Jeter, M.D., Plymouth Clinic, Plymouth
Trogler F. Adkins, M.D., 306 S. Gregson Street, Durham
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Robert F. Poole, Jr., M.D., 817 Hillsboro Street, Raleigh
George W. Kernodle, M.D., Medical Center Pharmacy Bldg., Burlington

29. **Committee on Mental Health (14) VI-7**
Allyn B. Choate, M.D., *Chairman*, 1012 Kings Drive, Charlotte
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Milton S. Clark, M.D., Wachovia Bank Bldg., Goldsboro
James F. Elliott, M.D., State Hospital, Butner
John W. Ervin, M.D., Box 132, State Hospital, Morganton
John A. Fowler, M.D., 2212 Erwin Road, Durham
Thomas T. Jones, M.D., 604 W. Chapel Hill Street, Durham
Hans Lowenbach, M.D., Duke Hospital, Durham
Phillip G. Nelson, M.D., 1211 Rock Spring Road, Greenville
James T. Proctor, M.D., 428 Ridgefield Road, Chapel Hill
Walter A. Sikes, M.D., State Hospital, Raleigh
Joseph B. Stevens, M.D., 1017 Professional Village, Greensboro
David A. Young, M.D., 714 St. Mary's Street, Raleigh

30. **Committee on Necrology (3) IV-4**
Charles H. Pugh, M.D., *Chairman*, Box 527, Gastonia
Charles T. Pace, M.D., Co-Chairman, 1802 Independence, Greensboro
Ben F. Royal, M.D., Box 628, Morehead City

31. **Committee on Negotiations (3) IX-0**
Wm. F. Hollister, M.D., *Chairman* (term expires 1961), Moore County Hospital, Pinehurst
Theodore S. Raiford, M.D. (term expires 1963), 301 Doctors Bldg., Asheville
Hubert McN. Poteat, Jr., M.D. (term expires 1965), 713 Wilkins Street, Smithfield

32. Nominating Committee

Jacob H. Shuford, M.D., *Chairman* (9th) 7 Main Avenue Place, S. W., Hickory
Jesse Caldwell, Jr., M.D. (7th), 114 W. Third Street, Gastonia
Robert M. Fales, M.D. (3rd), 913 Murchison Bldg., Wilmington
Paul F. Maness, M.D. (6th), 328 W. Davis Street, Burlington
Robert M. McMillan, M.D. (5th), 140 S. W. Broad Street, Southern Pines
Charles M. Norfleet, Jr., M.D. (8th), Bowman Gray, Winston-Salem
Zack D. Owens, M.D. (1st), Medical Building, Elizabeth City
Karl B. Pace, M.D. (2nd), Box 620, Greenville
Malory A. Pittman, M.D. (4th), Wilson Clinic, Wilson
James S. Raper, M.D. (10th), 103 Doctors Bldg., Asheville

33. Committee of Physicians on Nursing (8) IV-5

Robert R. Cadmus, M.D., *Chairman*, N. C. Memorial Hospital, Chapel Hill
Harry L. Brockmann, M.D., 624 Quaker Lane, High Point
Badie T. Clark, M.D., Carolina General Hospital, Wilson
James E. Davis, M.D., 1200 Broad Street, Durham
Wm. D. James, Jr., M.D., Box 351, Hamlet
David T. Smith, M.D., Duke Hospital, Durham
Thomas J. Taylor, M.D., 643 Roanoke Avenue, Roanoke Rapids

Nursing and Nursing Education—Subcommittee

Thomas J. Taylor, M.D., *Chairman*, 643 Roanoke Avenue, Roanoke Rapids

Nursing Careers-Subcommittee

Andrew J. Crutchfield, M.D., *Chairman*, 610 W. Fifth Street, Winston-Salem

Improvement of the Care of the Patient-Subcommittee

Harry L. Brockmann, M.D., *Chairman*, 624 Quaker Lane, High Point
David T. Smith, M.D., Duke Hospital, Durham

34. Committee on Occupational Health (9) VI-8

Harry L. Johnson, M.D., *Chairman*, Box 530, Elkin
B. F. Cozart, M.D., 1116 S. Main Street, Reidsville
B. Joseph Christian, M.D., 948 Walker Avenue, Greensboro
Mac Roy Gasque, M.D., Pisgah Forest
W. B. Townsend, M.D., Box 420, Charlotte
Edgar T. Beddingfield, Jr., M.D., P. O. Box 137, Stantonsburg
James Kent Rhodes, M.D., 307 Woodburn Rd., Raleigh
Wm. P. Richardson, M.D., N. C. Memorial Hospital, Box 758, Chapel Hill
Logan T. Robertson, M.D., 17 Charlotte Street, Asheville

35. Committee on Postgraduate Medical Study (8) IV-6

Samuel L. Parker, Jr., M.D., *Chairman*, Kinston Clinic, Kinston
Wayne J. Benton, M.D., 2320 Battleground Rd., Greensboro
Richard C. Proctor, M.D., Bowman Gray, Winston-Salem
W. Otis Duck, M.D., Box 387, Mars Hill
Joseph A. Isenhower, M.D., 17 2nd Avenue, N. E., Hickory
Wm. McN. Nicholson, M.D., Duke Hospital, Durham
Frank R. Reynolds, M.D., 1613 Dock Street, Wilmington
Wm. P. Richardson, M.D., N. C. Memorial Hospital, Chapel Hill

36. Committee on Poliomyelitis (14) VI-9

Samuel F. Ravenel, M.D., *Chairman*, 104 E. Northwood Street, Greensboro
Jay M. Arena, M.D., 1410 Duke University Road, Durham
Edward P. Benbow, Jr., M.D., 104 E. Northwood Street, Greensboro
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Charles R. Bugg, M.D., 627 W. Jones Street, Raleigh
Ralph B. Garrison, M.D., 222 N. Main Street, Hamlet
Wm. F. Harrell, Jr., M.D., Guaranty Bank Bldg., Elizabeth City
Richard S. Kelly, M.D., 1606 Morganton Road, Fayetteville
Donald B. Koonce, M.D., 408 N. 11th Street, Wilmington
Robert C. Pope, M.D., Wilson Clinic, Wilson
Frank H. Richardson, M.D., Children's Clinic, Black Mountain
Wm. A. Sams, M.D., Box BB, Marshall
Wm. G. Spencer, Jr., M.D., 301 W. End Avenue, Wilson
Robert F. Young, M.D, Halifax County Health Department, Halifax

37 Committee on Public Relations (3) (7 District Consultants) V-4

Edgar T. Beddingfield, Jr., M.D., *Chairman*, (4th) (1962), P. O. Box 137, Stantonsburg
Ralph B. Garrison, M.D. (5th) (1961), 222 N. Main Street, Hamlet
Courtney D. Egerton, M.D. (6th) (1963), 714 St. Mary's Street, Raleigh
Stephen R. Bartlett, Jr., M.D. (2nd) (consultant), 1001 E. 4th Street, Greenville
Glenn E. Best, M.D., (3rd) (consultant), Main Street, Clinton
Wm. H. Burch, M.D., (10th) (consultant), Valley Clinic & Hospital, Bat Cave
Joseph S. Holbrook, M.D., (9th) (consultant), Davis Hospital, Statesville
Fred K. Garvey, M.D. (8th) (consultant), Bowman Gray, Winston-Salem
Walter Spaeth, M.D. (1st) (consultant), 116 South Road Street, Elizabeth City
David G. Welton, M.D. (7th) (consultant), 403 N. Tryon Street, Charlotte

38. Committee on Physical Rehabilitation (8) VI-10

George W. Holmes, M.D., *Chairman*, 2240 Cloverdale Avenue, Winston-Salem
Charles H. Ashford, M.D., 603 Pollock Street, New Bern
F. P. Dale, M.D., Kinston Clinic, Kinston
J. Leonard Goldner, M.D., Duke Hospital, Durham
Walter S. Hunt, Jr., M.D., 1313 Daniels Street, Raleigh
John Hays Rosser, M.D., 222 N. Center Street, Statesville
Marion B. Pate, Jr., M.D., 123 N. Second Street, St. Pauls
George H. Wadsworth, M.D., 405 Colony Avenue, Ahoskie

39. Committee on Rural Health and General Practitioner Award (9) V-5

R. Vernon Jeter, M.D., *Chairman*, Plymouth Clinic, Plymouth
Philip E. Dewees, M.D., Box 217, Sylva
Vernon W Taylor, Jr., M.D., 815 N. Bridge St., Elkin

J. O. Williams, M.D., Cabarrus County Hospital, Concord
George T. Wolff, M.D., 135 Bishop Street, Greensboro
Charles T. Wilkinson, M.D., 209 Wilkinson Bldg., Wake Forest
Edward L. Boyette, M.D., Kenansville
W. E. Swain, M.D., 201 E. 5th Street, Washington
John T. Dees, M.D., Box 248, Burgaw

40. **Committee on School Health and State Coordinating Service (9) VI-11**
Irma C. Henderson Smathers, M.D., *Chairman*, 1295 Merrimon Avenue, Asheville
Bruce B. Blackmon, M.D., Buies Creek
Jean Davidson Craven, M.D., 19 W. 3rd Avenue, Lexington
Charles H. Gay, M.D., 1012 Kings Drive, Charlotte 7
Wm. C. Hunter, M.D., 103 Pine Street, Wilson
Floyd L. Knight, M.D., 103 Hillcrest Drive, Sanford
Joseph S. Bower, M.D., Box 12, Pink Hill
Robert C. Pope, M.D., Wilson Clinic, Wilson
Wm. T. Rainey, Sr., M.D., Highsmith Hospital, Fayetteville

41. **Committee Advisory to Student A.M.A. Chapters in North Carolina (8) II-8**
John P. Davis, M.D., *Chairman*, 821 Nissen Bldg., Winston-Salem
Edgar T. Beddingfield, Jr., M.D., P. O. Box 137, Stantonsburg
Charles G. Young, M.D., 135 Bishop Street, Greensboro
Isaac E. Harris, Jr., M.D., 1200 Broad Street, Durham
John W. Nance, M.D., Main Street, Clinton
Robert A. Ross, M.D. (UNC Consultant), N. C. Memorial Hospital, Chapel Hill
Wm. P. J. Peete, M.D. (Duke Consultant), Duke Hospital, Durham
Robert L. McMillan, M.D. (BG Consultant), Bowman Gray, Winston-Salem

42. **Committee on Veterans Affairs (9) VI-12**
Samuel L. Elfmon, M.D., *Chairman*, 225 Green Street, Fayetteville
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Wilmer C. Betts, M.D., 2109 Clark Avenue, Raleigh
H. Francis Forsyth, M.D., Bowman Gray, Winston-Salem
David L. Phillips, M.D., 110 Oak Avenue, Spruce Pine
James D. Piver, M.D., 209 Bayshore Blvd., Jacksonville
R. W. Postlethwait, M.D., VA Hospital, Durham
John T. Session., Jr., M.D., UNC Dept. of Medicine, Chapel Hill
Charles R. Welfare, M.D., Professional Bldg., Winston-Salem

43. **Insurance Industry Liaison Committee (10) V-f**
Frank W. Jones, M.D., *Chairman*, Catawba Hospital, Newton
Jack E. Mohr, M.D., Acting Chairman, Medical Arts Building, Lumberton
Grover C. Bolin, Jr., M.D., Box 120, Smithfield
Andrew J. Dickerson, M.D., 1600 N. Main Street, Waynesville
Archie Y. Eagles, M.D., 407 Colony Avenue, Ahoskie
Cleon W. Goodwin, M.D., Wilson Clinic, Wilson
Charles I. Harris, Jr., M.D., Martin General Hospital, Williamston
Barry F. Hawkins, M.D., Ardsley Road, Concord
James R. Wright, M.D., 604 Professional Bldg., Raleigh
George T. Wolff, M.D., 135 Bishop Street, Greensboro

44. **Committee Liaison to Study Integration of Negro Physicians into Medical Society of State of North Carolina (7) I-2**
J. Street Brewer, M.D., *Chairman*, P. O. Box 98, Roseboro
Paul F. Whitaker, M.D., 1205 N. Queen Street, Kinston
Ben F. Royal, M.D., 900 Shepherd Street, Morehead City
James P. Rousseau, M.D., 1014 West Fifth Street, Winston-Salem
Joseph W. Hooper, Jr., M.D., 410 N. 11th Street, Wilmington
James E. Hemphill, M.D., 1012 Kings Drive, Charlotte 7
Henry B. Perry, Jr., M.D., 344 North Elm Street, Greensboro

BULLETIN BOARD

COMING MEETINGS

North Carolina Urological Association, Annual Meeting—Greystone Inn, Roaring Gap, September 25-26.

North Carolina Fifth District Medical Society Meeting—Mid Pines Club, Pinehurst, October 5.

Eleventh Annual Winston-Salem Heart Symposium—Robert E. Lee Hotel, Winston-Salem, October 7.

Congress on Industrial Health—Hotel Charlotte, Charlotte, October 10-12.

Duke University Medical Postgraduate Seminar Cruise to the West Indies—November 9-18.

North Carolina Academy of General Practice, Annual Meeting—Carolina Hotel, Pinehurst, November 27-30.

Fifth International Congress on Nutrition—Sheraton Park and Shoreham Hotels, Washington, D.C., September 1-7.

Southern Trudeau Society and Southern Tuberculosis Society Meeting—Hotel Francis Marion, Charleston, South Carolina, September 14-16.

American Rhinologic Society, Sixth Annual Meeting—Belmont Hotel, Chicago, October 8.

American College of Surgeons, Forty-sixth Annual Clinical Congress—San Francisco, October 10-14.

Inter-state Post-graduate Association, Forty-fifth Scientific Assembly—Pittsburgh, October 31-November 3.

News Notes from the Duke University Medical Center

A Duke University medical postgraduate seminar cruise to the Virgin Islands and Puerto Rico has been scheduled for next November.

Plans for the cruise were announced by Dr. William M. Nicholson, assistant dean of the Duke Medical School in charge of postgraduate education. This cruise will replace one which has been scheduled for the Baltic area in June and which was cancelled, Dr. Nicholson said.

Purpose of the medical cruises is to enable physicians to combine postgraduate education with vacation travel. Lectures by Duke Medical Center faculty members are given aboard ship during the cruises.

Physicians participating in the Virgin Islands cruise will sail from New York aboard the Swedish American Motorlines Kungsholm on November 9. Stops will be made at St. John and St. Thomas in the Virgin Islands and at San Juan, Puerto Rico. The cruise will terminate at New York on November 18.

Serving on the shipboard faculty will be Dr. Edwin P. Alyea, professor of urology; Dr. Nicholson, professor of medicine; Dr. Elbert L. Persons, professor of medicine; Dr. William W. Shingleton, professor of surgery; and Dr. Doris A. Howell, associate professor of pediatrics.

The lectures will deal with subjects that include thyroid abnormalities, chemical treatment of cancer, arthritis, diabetes, and blood disease. The program will provide 30 hours of Category I, Postgraduate Education, required by the American Academy of General Practice.

Information concerning the cruise may be obtained by writing to the Director of Postgraduate Education, Duke University Medical Center, Durham, North Carolina.

* * *

A study aimed at the establishment of an Institute on Continued Patient Care has been launched at the Duke University Medical Center.

Currently being evaluated by State public health officials, welfare leaders and others, the proposed institute would provide an educational program for workers in various health fields. Purpose of the program would be to mobilize and coordinate health services that are available to patients after their discharge from hospitals.

David P. Henry, Duke Medical Center rehabilitation coordinator who presided at a meeting held here to discuss the possibility of such a program, said that hospital patients are often unable to return home when their condition permits discharge simply because no resources are readily available for the special home care that is required for them.

In addition to local physicians, health personnel such as nurses, physical therapists, welfare workers and vocational rehabilitation counselors play important roles in the home care of a patient after he leaves the hospital, Henry stated. Also, important contributions in this area can be made by voluntary groups such as ministers civic clubs and women's clubs, he said. A coordinated follow-up program with clear-cut areas of responsibility would enable all these groups and persons to function effectively as a team.

Among persons attending the Duke meeting, which was held to study the problem of follow-up care and to obtain all possible information for evaluation, were: Dr. Roy Norton, head of the N. C. Department of Public Health; Dr. Ellen Winston, head of the N. C. Department of Public Welfare; Dr. Amos Johnson of Garland, president of the N. C. Medical Society; William N. Ruffin of Durham, former president of the National Assn. of Manufacturers; Col. Charles Warren, director of the N. C. Office of Vocational Rehabilitation; Dean Edward McGavin of the University of North Carolina School of Public Health; Dr. David Garvin of Chapel Hill, director of the Orange-Person-Chatham County Health District; Dr. James H. Semans, chairman of the Duke Medical Center's rehabilitation committee; F. Ross Porter, director of the Duke Medical Center Foundation; and Duke Hospital superintendent Charles H. Frenzel.

Dean W. C. Davison of the Duke Medical School pointed out that in addition to lightening the cost of hospital care by permitting earlier discharges of many patients, this program could make possible better care of the aged and chronically ill as well as the patient just home from the hospital.

* * *

The retiring dean of the Duke University School of Medicine, Dr. W. C. Davison, has been elected president of Alpha Omega Alpha, national Honor Medical Society.

Dr. Davison, who retired as dean of the Duke Medical School on July 1, will retire from the faculty in August, 1961. During his final year he will continue as James B. Duke Professor of Pediatrics.

In electing Dr. Davison to head the national 37,000-member body, the members of Alpha Omega Alpha placed the Duke dean among a select group of only five other persons who have been president of the society during its 58-year history.

Dr. Davison, a member of the board of directors, succeeds Dr. Walter Lawrence Bierring of Des Moines, Iowa.

Other Alpha Omega Alpha officers include Willard C. Rappleye of New York, vice-president; and Josiah J. Moore of Chicago, secretary-treasurer, both re-elected; and James A. Campbell, who was named secretary-treasurer-elect.

* * *

How did the first man get to North America?

In an attempt to solve the ancient riddle, a Duke University research project has been launched under the direction of Dr. Daniel A. Livingstone of the Zoology Department faculty. A $25,600

grant from the National Science Foundation will support the work over the next two years.

Paul Colinvaux, Duke graduate student who is assisting Dr. Livingstone, has just arrived in Alaska. He will make care drillings to extract materials from land under the lakes.

After the materials are obtained, they will be brought to Duke where they will be examined for plant and animal microfossils, as well as for chemical indications of past environment. Radioisotopic techniques will be used.

The Duke researchers hope to find out whether climatic conditions were the type which could have allowed man to cross to this continent.

* * *

A new infant formula laboratory where some 800 baby bottles are prepared each day under sterile conditions as exacting as those of an operating room has been open opened at Duke Hospital. The $45,000 facility replaces the previous formula laboratory and is four times as large.

Mrs. A. H. Hampton, head nurse in the laboratory, said that the unit provides formula for infants in the premature and newborn nurseries and for those on medical and surgical wards. As many as 25 different kinds and strengths of formula are made up daily according to doctors' specifications.

Dr. Angus McBryde, professor of pediatrics, was instrumental in planning the laboratory, which is among the latest of a number of renovation projects at the Duke Medical Center.

News Notes from the University of North Carolina School of Medicine

Awards and honors were announced by the University of North Carolina School of Medicine at special exercises in honor of the 69 members of the graduating class.

Dr. W. Reece Berryhill, dean of the school, presided over the program and Dr. Nathan Womack, head of the Department of Surgery, was the principal speaker. A brief address also was given by James R. Harper of Chapel Hill, president of the graduating class.

The American Medical Women's Association Scholastic Award went to Margaret B. Scales of Bay Shore, New York.

Robert B. Payne of Gastonia received the Deborah C. Leary Memorial Award.

The Isaac H. Manning Award was presented to Carwile LeRoy of Elizabeth City.

The Mosby Book Awards were received by Robert J. Cowan, Greensboro; Frederick D. Hamrick III, Rutherfordton; Zebulon Weaver, III, Asheville; Charles P. Eldridge, Jr., Raleigh and James R. Harper of Chapel Hill.

The Roche Award went to William L. Black of Charlotte.

Kenneth F. McCain of High Point and Carwile LeRoy of Elizabeth City were given the Sheard-Sanford Prizes of the American Society of Clinical Pathologists.

The senior papers of 11 students were cited as excellent and have been bound and placed in the U.N.C. Division of Health Affairs Library.

These papers were written by William L. Black, Charlotte; John R. Curtis, Bessemer City; Gerald W. Fernald, Wilson; Carwile LeRoy, Elizabeth City; Kenneth F. McCain, High Point; James M. Marlowe, Walstonburg; William N. Mical, Cincinnati; Elwood E. Morgan, Burlington; Robert B. Payne, Gastonia; William S. Pearson, Statesville, and John C. Tayloe, Jr., of Washington.

A total of 17 other senior papers were cited as being outstanding.

* *

A number of faculty members of the University of North Carolina School of Medicine participated in the annual meeting of the American Medical Association in Miami in June.

Drs. Richard L. Dobson and Donald C. Abele of the Department of Medicine, and D. M. Hale, a research laboratory supervisor, presented a paper on "The Effect of High and Low Salt Intake and Repeated Episodes of Sweating on the Human Endocrine Sweat Gland."

Dr. Charles H. Burnett, head of the Department of Medicine, serves on the executive committee of the Section of Experimental Medicine and Therapeutics.

Drs. W. H. Akeson and D. S. Kellam prepared an exhibit entitled "Congenital Kyphosis: The Genesis of Microspondyly." Dr. Akeson is assistant professor of surgery and Dr. Kellam is a former resident in orthopedic surgery at N. C. Memorial Hospital and is now with the Charlotte Memorial Hospital.

* * *

The Home Savings and Loan Association of Durham and Chapel Hill has established scholarships at the University of North Carolina School of Medicine which will amount to $1,000 annually by 1963.

The first scholarship, for $250, will be awarded to a first year medical student this fall and is renewable for the entire four years of medical study. A similar award will be made each year to a student of the incoming class of the School of Medicine. By 1963 four students will be receiving a total of $1,000 annually.

The selection of the students for these scholarships and the conditions of satisfactory performance necessary for annual renewal of them will be determined by the School of Medicine.

In announcing the scholarship, Dr. William L. Fleming, assistant dean of the School of Medicine, explained that scholarships for medical schools were of particular importance at the present time, in view of the increasing need of physicians to keep pace with the population growth of the nation.

Dr. Fleming said that the duration and cost of medical training was much higher than in other professional fields, making scholarships more needed.

* * *

Dr. Colin G. Thomas, Jr., of the Department of Surgery and Dr. John T. Sessions of the Department of Medicine spoke before the annual meeting of the Seaboard Medical Association at Nags Head recently. Dr. Thomas talked on "The Timing and Selection of Surgical Procedures in the Management of Pancreatitis," and Dr. Sessions discussed the topic, "Does Alcohol Damage the Liver When Taken Before, After or Instead of Meals."

* * *

Dr. Ernest H. Wood, professor of radiology, was elected vice president of the American Board of Radiology at its annual trustee meeting in Cincinnati. He has been a trustee of the board for several years.

* * *

A student of the University of North Carolina School of Medicine will spend this summer working in a small, remote hospital in the Philippine Islands.

Colonel D. Bessinger, Jr., of Asheville, who will graduate from the U.N.C. School of Medicine next June will spend the summer working in a small remote hospital in the Philippines. His work will be under the sponsorship of the Foreign Mission Board of the Southern Baptist Convention. This project is made possible by a grant of $1,985 from the Smith, Kline and French Foreign Fellowship, which is administered by the American Association of Medical Colleges.

Working with physicians already practicing at Mati, Bessinger will help with the public health program and at the same time gain valuable clinical experience. In addition, he will serve as a "goodwill ambassador" representing American medical schools in bringing the latest medical techniques and procedures to remote hospitals and clinics.

* * *

Dr. Judson J. Van Wyk, associate professor of pediatrics will present three lectures in Europe during June and July.

He will speak in Switzerland, England and Denmark and will also visit various endocrine clinics in France, Germany and Holland.

Dr. Van Wyk will address the Zurich Kinder Klinik in Zurich, Switzerland, on "Genetic Factors in Staple Goiter."

He will speak before the Fourth International Goiter Congress, which meets in London July 5-8. This lecture also will deal with the inherited aspects of goiter.

Dr. Van Wyk will attend the First International Endocrine Congress in Copenhagen, Denmark July 18-23. Here he will lecture on "Syndrome of Precocious Menstruation and Galactorrhea in Juvenile Hypothyroidism: An Example of Hormonal Overlap in Pituitary Feedback."

* * *

Four psychiatrists of the staff of N. C. Memorial Hospital of the University of North Carolina have been cited for outstanding theses submitted in connection with their three-year residency training here.

They are Dr. J. Iverson Riddle, Morganton; Dr. Rex Speers, Claremont; Dr. George Thrasher, Roanoke, Virginia, and Dr. Andrew Briggs of Richmond.

Dr. Riddle took first place and Dr. Speers was awarded second place for the Anclote Manor Hospital Prize. These awards were $150 and $50.

The title of Dr. Riddle's thesis was "Mental Subnormality: Its Place in Psychiatric Residency Training Program." Dr. Speers' thesis was "Brief Psychotherapy with College Women—Technique and Criteria for Selection."

Dr. Thrasher and Dr. Briggs received honorable mention for their theses.

The medical director of Anclote Manor Hospital at Tarpon Springs, Florida, is Dr. Lorant Forizs, former faculty member of the Department of Psychiatry of the U.N.C. School of Medicine. The awards were made here and Dr. Forizs was on hand for the presentations.

The theses submitted by the four physicians were required as a part of their specialized training in psychiatry. All four men completed their training in June.

News Notes from the Bowman Gray School of Medicine

Dr. C. C. Carpenter, dean of the Bowman Gray School of Medicine, has announced that on July 1 Dr. William H. Boyce will assume his new duties as director of the Section on Urology, Department of Surgery. He will replace Dr. Fred K. Garvey.

Dr. Garvey, head of the section since 1941, will continue as professor of urology on the full-time faculty of the medical school and on the staff of the urologic service of the North Carolina Baptist Hospital.

Dr. Boyce, a graduate of Vanderbilt University School of Medicine, completed his residency training in urology at the Cornell University Medical Center and the University of Virginia Hospital before joining the faculty of the Bowman Gray School of Medicine in 1952. He has made outstanding contributions in the field of research and has contributed widely to the medical literature. He is a member of the American Association of Genito-Urinary Surgeons, the American Board of Urology, the Clinical Society of Genito-Urinary Surgeons and the Society of University Surgeons.

Three new faculty appointments have been announced by the dean of the Bowman Gray School of Medicine.

The appointments, effective July 1, are: Dr. Henry S. Miller, instructor in internal medicine; Dr. Herman E. Schmid, Jr., instructor in physiology and pharmacology; and Dr. Robert P. Thomas, instructor in ophthalmology.

Dr. Miller is a graduate of Bowman Gray School of Medicine and has just finished his residency training in medicine here.

Dr. Schmid, a graduate of the University of Chicago College of Medicine, interned at the Milwaukee County Hospital, Milwaukee, Wisconsin, and served as a house physician at the Santa Cruz County Hospital, Santa Cruz, California. He has also served one year as administrator of the Grants and Training Branch, National Heart Institute, National Institutes of Health, Bethesda, Maryland.

Dr. Thomas is a graduate of the University of North Carolina School of Medicine and was engaged in general practice for two years before joining the house staff of the North Carolina Baptist Hospital in 1957 as an assistant resident in ophthalmology.

* * *

Dr. C. Hampton Mauzy, professor of obstetrics and gynecology, has assumed supervision of obstetrics at the medical school and the N. C. Baptist Hospital under the chairmanship of Dr. Frank R. Lock. This will enable Dr. Lock to devote more of his time to the direct supervision of gynecologic work. Dr. Mauzy joined the faculty of the medical school in 1941.

* * *

Dr. Frank H. Hulcher, instructor in biochemistry, is engaged in work as research collaborator at the Brookhaven National Laboratories, Upton, Long Island, New York, for the months of June, July and August.

* * *

Dr. Wingate M. Johnson, professor emeritus of clinical internal medicine, presented a paper entitled, "Medical Care of Older Patients," at the June meeting of the American Medical Association at Miami Beach, Florida. Dr. Johnson is a former trustee of the A.M.A. and an ex-officio member of the House of Delegates. He is also on the national and state committees for care of the aged.

* * *

Dr. Howard H. Bradshaw, chairman of the Department of Surgery, delivered the first Julian A. Moore Memorial Lecture at the June meeting of the Buncombe County Medical Society in Asheville. The title of Dr. Bradshaw's talk was, "Advances Made in Surgical Treatment of Pulmonary Tuberculosis."

On July 1, 101 doctors will begin house staff appointments at the North Carolina Baptist Hospital and the Bowman Gray School of Medicine. Of the total number, 68 doctors have served previous residencies and internships here, and 33 are beginning training here for the first time.

The new appointments are:

Anesthesiology: assistant resident—Dr. J. Richard R. Bobb.

Medicine: resident—Dr. Thomas N. Massey, Jr.; assistant residents—Drs. Dean F. Gray, John D. Hines, Phillip A. Sellers; interns—Drs. John D. Bradley, Jr., Paul R. Brown, Milton S. Goldman, James N. Hinson, George William Joyce, John Scott Miller, Jr., Bernard S. Morse, and Isaiah J. Seligman.

Neurosurgery: assistant resident—Dr. Trave L. Brown, Jr.

Obstetrics and Gynecology: assistant residents—Drs. Sam Jones Crawley, Jr. and Edward C. Sutton.

Ophthalmology: assistant resident—Dr. Withrow R. Legge, Jr.

Orthopaedics: assistant residents—Drs. Louis B. Daniel, Jr. and Frank Sellers.

Otolaryngology: assistant resident—Dr. Robert F. Thompson.

Pathology: assistant residents—Drs. William R. Beach, III, Stephen Mamick, Modesto Scharyj, and Franklin Bailey Wilkins; intern—Dr. Robert E. Jones, Jr.

Pediatrics: assistant resident—Dr. Max Lassiter.

Radiology: assistant residents—Drs. James V. Blazek, Ronald L. Kelly, Jr., and James L. Quinn, III.

Surgery: assistant residents—Drs. W. Claude Hollingsworth, William G. Montgomery, and Earl P. Welch; intern—Dr. Tim Pennell.

Four new physicians have been appointed for postdoctoral training as fellows. They are: Drs. William B. Courtney, Fritz R. Dixon, and Sidney Girsch, pathology; and Richard B. Patterson, pediatric-hematology.

Edgecombe-Nash Medical Society

The monthly meeting of the Edgecombe-Nash Medical Society was held in Rocky Mount on June 8.

Dr. A. W. Hedgepeth, program chairman for June, introduced the speaker, Dr. Paul Bunch, who discussed pediatric surgery from a urologic standpoint.

News Notes

Dr. C. A. Kimel has announced the opening of his office for general practice at Ebert Street Extension and West Clemmonsville Road, Winston-Salem.

Inter-State Post-Graduate Association

The Inter-State Post-Graduate Association will hold its forty-fifth Scientific Assembly at the Pittsburgh Hilton Hotel on October 31 to November 3. Pre-registration, accommodations, information, and other communications may be addressed to Mr. Roy T. Ragatz, Executive Director, at Box 1109, Madison 1, Wisconsin.

Twenty-one of the subjects are to be devoted to subject of medicine, nine to surgery, one to radiology, one to otolaryngology, and one to social economics.

The program is approved for postgraduate education, Category I, by the American Academy of General Practice.

American Board of Obstetrics and Gynecology

The next scheduled examination, (Part I), written, will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, January 13, 1961.

Candidates submitting applications in 1960 for the 1961 examinations are not required to submit case reports as previously required to complete the Part I examinations of this Board. In lieu of this requirement, new candidates are required to keep in their files a duplicate list of hospital admissions as submitted with their application, for submittal at the annual meeting in Chicago should they become eligible to take the Part II (oral) examinations.

Reopened candidates will be required to submit case reports for review thirty days after notification of eligibility. Scheduled Part I and candidates resubmitting case reports are required to submit Case Reports prior to August 1 each year.

Current bulletins may be obtained by writing to:

Robert L. Faulkner, M.D.
Executive Secretary and Treasurer
2105 Adelbert Road
Cleveland 6, Ohio

AMERICAN NATIONAL RED CROSS

The Chilean earthquake disaster, one of the worst in modern times, has demonstrated again the characteristic generosity of Americans toward people in trouble.

Chile suffered this disaster during May, leaving hundreds of thousands of Chileans cold, sick, injured and homeless. Not only was emergency relief needed but a long-range recovery program of gigantic proportions was necessary.

At President Eisenhower's request, General Alfred M. Gruenther, president of the American Red Cross, became coordinator for voluntary Chilean relief. Citizens were urged to make their contributions to the American Red Cross or other agencies having programs in Chile. These included Catholic Relief Service, Church World Service, CARE, Seventh Day Adventists Welfare Service, and the Church of Jesus Christ of Latter Day Saints.

As General Gruenther explained, "The impact of voluntary contributions by individuals on the suffering people of Chile will be tremendous."

In addition to the contributions of individuals, tons of food, medical supplies, tents and other aid were immediately airlifted to help the homeless and the helpless. The American Red Cross and numerous other organizations made emergency allocations from their own funds and began to campaign for funds and relief supplies for a long-range program to help the people of Chile.

American College of Surgeons

Improvement in the total care of surgical patients will be the goal of 10,000 doctors expected to attend the forty-sixth annual Clinical Congress of the American College of Surgeons in San Francisco, California, October 10 through 14.

More than 1,000 participants will take part in the various programs as authors of research reports, teachers of postgraduate courses, participants in panel discussions, lecturers, and operating surgeons in motion pictures and closed-circuit telecasts.

On the final evening, October 14, initiates will be presented for fellowship, honorary fellowships conferred, and officers inaugurated.

NATIONAL LEAGUE FOR NURSING INC.

Admissions to schools of professional and practical nursing reached an estimated 71,297 new students in 1959, compared with 68,851 in 1958, according to an announcement by Fred C. Foy, chairman, Committee on Careers, National League for Nursing, New York.

Professional nursing programs admitted 47,797 new students, a slight increase over the 47,351 admissions of the preceding year. Practical nursing schools enrolled an estimated 23,500 students in 1959, compared with 21,500 in 1958.

CATHOLIC HOSPITAL ASSOCIATION

Officers elected at the forty-fifth annual convention of the Catholic Hospital Association of the United States and Canada in Milwaukee, Wisconsin, recently included The Rt. Rev. Msgr. A. W. Jess, Camden, New Jersey, who took over the duties of president from Father John J. Humensky, Cleveland, Ohio. Sister M. Christine, C. C. V. I., of St. Joseph's Hospital, Houston, Texas, was elected to represent the Southern section of the United States, and Sister John Joseph, C.S.J., of Santa Rosa Hospital, Santa Rosa, California, to represent the Western section.

American Hearing Society

Philip M. Morgan, industrialist, civic leader, and philanthropist of Worcester, Massachusetts, was re-elected president of the American Hearing Society at its forty-first annual conference in Detroit (May 24-27), attended by professional workers in the field of hearing and representatives of the agency's lay membership from all parts of the country. Program for the four-day meeting centered on the theme "Communication: Key to Living."

Re-elected as officers of the society were: first vice president—Miss Mary E. Switzer, director, Office of Vocational Rehabilitation, Department of Health, Education, and Welfare; second vice president—James McKnight Timmons, M.D.; of Columbia, South Carolina, and treasurer—E. B. Whitten, executive director of the National Rehabilitation Association.

Biological Photographic Association Inc.

Photographers and scientists interested in the application of new photographic techniques and equipment in the field of biology will convene in Salt Lake City, Utah, this summer for the thirtieth annual meeting of Biological Photographic Association. The meeting will be held August 23 through 26, with headquarters at the Hotel Utah Motor Lodge.

American Geriatrics Society

The Willard O. Thompson Memorial Award "for distinguished contributions to geriatric medicine" was presented to Dr. William B. Kountz of St. Louis, Missouri, at the annual dinner of the American Geriatrics Society held recently at Miami Beach.

Presentation of the award was made by Dr. Edward Henderson, chairman of the Society's Award Committee and editor of the **Journal of the American Geriatrics Society**, on the occasion of the society's seventeenth annual meeting. A professional organization with a membership of more than 7,000 physicians, the society has as its purpose encouraging and promoting the study of geriatrics. The Willard O. Thompson Memorial Award, which includes an honorarium and a medal, is given annually to an outstanding specialist in geriatric medicine.

BLUE SHIELD MEDICAL CARE PLANS

Chairman of the Board of the National Association of Blue Shield Plans, was named one of three national civic leaders to receive the 1960 "Health-USA" award sponsored jointly by the Metropolitan Washington (D.C.) Board of Trade and the Medical Society of the District of Columbia. Dr. Stubbs, who has held important posts in Blue Shield both at the local and national levels

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"In our experience the action of DBI on the adult stable type of diabetes is impressive . . . **88% were well controlled by DBI.**"[1]

"Most mild diabetic patients were well controlled on a biguanide compound [DBI], and such control was occasionally superior to that of insulin. This was true regardless of age, duration of diabetes, or response to tolbutamide."[2]

"DBI has been able to replace insulin or other hypoglycemic agents with desirable regulation of the diabetes when it is used in conjunction with diet in the management of adult and otherwise stable diabetes."[3]

sulfonylurea failures

Among those diabetics who responded to tolbutamide initially and became secondary failures **DBI "gave a satisfactory response in 55%."**[4]

"DBI is capable of restoring control in a considerable portion of patients in whom sulfonylurea compounds have failed, either primarily or secondarily."[5]

"All twelve secondary tolbutamide failures have done well on DBI."[6]

"34 out of 59 sulfonylurea primary failures were successfully treated with DBI."[7]



during the past decade, was selected for ". . . . his distinguished contributions to the health of the American people." Dr. Stubbs received the "Health-USA" award at a testimonial luncheon held in Washington, D. C. on June 1. Present at the award luncheon were Secretary Flemming, members of Congress and medical leaders.

The two other recipients of the "Health-USA" awards, which are given annually to recognize "Statesmanship in Health," are Major General Howard McC. Snyder, physician to the President of the United States, and Elmer H. Bobst, Chairman of the Board of Warner-Lambert Pharmaceutical Company.

U. S. Department of Health, Education, and Welfare

Douglas H. K. Lee, M.D., has been appointed chief of the research headquarters of the Occupational Health Program, Public Health Service, U. S. Department of Health, Education, and Welfare, at Cincinnati, Ohio. In his new position, Dr. Lee will be responsible for directing technical research and field studies of occupational health problems and professional and technical consultation services to state agencies, labor, and industry.

Statement by Surgeon General Leroy E. Burney

Public Health Service scientists have been attending the Second International Conference on Poliomyelitis which has been meeting in Washington this week under the auspices of the World Health Organization. During the past year our staff have been following very closely the live virus trials in various parts of the world. This week, as a matter of fact, Dr. David E. Price, who served as my personal representative at a series of polio meetings in Moscow in mid-May, has made public a report on the use of live virus in the USSR during the past year.

I want to emphasize very strongly that the Public Health Service and I, as Surgeon General, have the responsibility for making sure that biological products are safe and effective. We take that responsibility very seriously. When the technical experts of the National Institutes of Health and their highly competent advisers are satisfied on these two points, it will be possible to license a live polio vaccine but not before. How soon that will be, I do not know.

I should point out that, so far, only one manufacturer has applied for a license. This request was returned for additional information; and no applications are now pending.

In the meantime we have in the Salk vaccine a proved and highly effective means for fighting



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(N^1-β-phenethylbiguanide) is available as white, scored tablets of 25 mg. each, bottles of 100.

Send for brochure with complete dosage instructions for each class of diabetes, and other pertinent information.

1. Walker, R. S.: Brit. M. J. 2:405, 1959.
2. Odell, W. D., et al.: A.M.A. Arch. Int. Med. 102:520, 1958.
3. Pearlman, W.: Phenformin Symposium, Houston, Feb. 1959.
4. DeLawter, D. E., et al.: J.A.M.A. 171:1786 (Nov. 28) 1959.
5. McKendry, J. B., et al.: Canad. M. A. J. 80:773, 1959.
6. Miller, E. C.: Phenformin Symposium, Houston, Feb. 1959.
7. Krall, L. P.: Applied Therapeutics 2:137, 1960.

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polio. It has been administered to about 80 million Americans during the past five years, and, despite a high polio incidence in the summer of 1959, it has proved over 90 percent effective when the recommended course of injections is followed.

Unquestionably, a vaccine which can be administered orally and is less expensive to produce would represent another major advance in the fight against polio throughout the world.

We want to be very sure that it is entirely safe and fully effective. When these two principles are fully established by a qualified manufacturer, we will be happy to grant licenses for its production.

UNITED STATES CIVIL SERVICE COMMISSION

The Civil Service Commission has announced the appointment of a five-man committee, representing the health insurance industry, to advise it in connection with the government-wide indemnity benefit plan, one of four types of health benefit plans to be offered federal employees under the new Federal Employees Health Benefits program.

Classified Advertisements

X-RAY Equipment for sale or exchange. 100 K.V. 100 M.A. Picker Radiographic unit with manual operated tilt table combined with Fluoroscope unit beneath the table. Provides instant change over from Fluoroscopy to Radiography with spot film device. Has had some use but is in excellent working order also dark room equipment, magnetic type plate changer, Stereoscopic view boxes, etc., will consider late model Ultra-violet lamp, surgical endotherm in exchange. Write Box 790, Raleigh, North Carolina.

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OPENINGS for psychiatrists, pediatricians and general physicians for varied assignments with North Carolina state hospitals and institutions for retarded children. Several locations available. Opportunity for all types of therapy, collaboration or individual research in service training. Medical school affiliations offers opportunity for university appointment. Entire program operates in close association with university program. Retirement, Social Security, and other attractive benefits including recent substantial increase in salaries for psychiatrists, pediatricians and general physicians. For particulars write Eugene A. Hargrove, M.D., Commissioner of Mental Health, P.O. Box 70, Raleigh, North Carolina.

DESIRABLE LOCATION for a physician. Contact Godley Realty Company, Mt. Holly Road, Charlotte, North Carolina.

The Month in Washington

An omnibus bill approved by the House Ways and Means Committee contains two provisions of major importance to physicians—Social Security coverage for doctors and a federal-state program to provide health care for older persons with low incomes.

About 150,000 self-employed physicians would be covered by Social Security on the same basis as lawyers, dentists and other self-employed professional people now are covered. Becoming effective for taxable years ending on December 31, 1960, or June 30, 1961, self-employed physicians would be required to pay a Social Security tax of 4½ per cent of the first $4,800 of income. Physicians also would be subject to the automatic increases in the Social Security tax in future years.

Medical and dental interns would be covered for the first time also.

Representative Wilbur Mills (D., Ark.), Chairman of the Ways and Means Committee, was the main architect of the health program for "medically indigent" aged. It was designed to provide a broad range of hospital, medical and nursing services for persons 65 years of age and older who are able financially to take care of their ordinary needs but not large medical expenses.

It would be up to each state to decide whether it participates in the program. The extent of participation — the number of benefits offered to older persons—also would be at the option of individual states.

The states would determine the eligibility of older persons to receive benefits under the program. However, the legislation laid down a general framework for eligibility; persons 65 years and older, whose income and resources — taking into account their other living requirements—are insufficient to meet the cost of their medical care.

The program couldn't become effective until July 1, 1961. Before putting such a program into effect, a state would have to submit to the federal government a plan meeting the general requirements outlined in the legislation.

The program would be financed jointly by the federal and state governments. Federal grants would have to be matched by participating states on the same basis as

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From Washington Office, American Medical Association 1523 L Street, N.W.

under the present-old age assistance formula.

States could elect to provide, with federal financial aid, any or all of the following benefits: (1) Inpatient hospital services up to 120 days per year; (2) skilled nursing-home services; (3) physicians' services; (4) outpatient hospital services; (5) organized home care services; (6) private duty nursing services; (7) therapeutic services; (8) major dental treatment; (9) laboratory and x-ray services up to $200 per year, and (10) prescribed drugs up to $200 per year.

The committee put a $325 million price tag on the program for the first full year of operation — $185 million federal and $140 million state. This estimate, however, could hardly be more than an educated guess of sorts. The actual cost would depend upon unpredictable factors — how many states would participate, how many benefits they would offer, and how many older persons would qualify and what services they would require.

The committee estimate was based on between 500,000 and 1 million older persons a year receiving health services under the program. If all states participated fully, the committee said, potential protection would be provided as many as 10 million aged whose financial resources are so limited that they would qualify in case of serious or extensive illness.

Payments under the program would go directly to physicians and other providers of medical, hospital and nursing services.

In addition to the federal grants for the "medically indigent," about $10 million more in federal funds would be authorized for payment to states for raising the standards of medical care benefits under present public assistance programs for older persons.

The approach of the Mills program was similar to that of Point 2 of the American Medical Association's 8-point program for health care of the aged. Point 2 stated that the A.M.A. supports federal grants-in-aid to states "for the liberalization of existing old-age assistance programs so that the near-needy could be given health care without having to meet the present rigid requirements for indigency." Such a liberalized definition of eligibility should be determined locally, the A.M.A. said.

Approval of the Mills plan by the committee marked a sharp setback for organized labor leaders. But they continued their all-out pressure campaign in an effort to get Congressional approval of Forand-type legislation that would use the Social Security system to provide hospitalization and medical care for the aged. After being defeated in the Ways and Means Committee, labor union leaders and other supporters of Forand-type legislation directed their major efforts to trying to get the Senate to substitute the Social Security approach.

The committee had been considering health-care-for-the-aged legislation intermittently for more than a year. Hearings were held on the Forand bill last summer but action was postponed until this year.

(CONTINUED ON PAGE 312)

BOOK REVIEWS

Biology of the Pleuropneumonialike Organisms. Annals of the New York Academy of Sciences, Vol. 79, Article 10, pages 305-758, 1960.

This publication of the New York Academy of Sciences emphasizes the increasing interest in the pleuropneumonia group of organisms which heretofore have been of primary concern to taxonomists and veterinary bacteriologists.

Contributions by 80 authors cover the present state of knowledge concerning the morphology, classification, isolation, cultivation, physiology, serology, chemotherapy, and pathogenicity of the pleuropneumonia group of organisms. It is fair to say that more questions are raised than are answered, but this only serves to indicate the need for further investigations.

The important question of the pathogenicity of the pleuropneumonia organisms for humans is not completely answered. The isolation of PPLO from approximately 70 per cent of more than 500 cases of primary and recurrent nongonococcal urethritis by Shepard would indicate more than a casual relationship. Similar results have been obtained by others when studying women with pelvic inflammatory disease and patients with acute hemorrhagic cystitis. The pathogenic capabilities are not clear-cut, however, since PPLO can be isolated from the genitourinary tracts of supposedly normal males and females. As Dr. H. E. Morton states on page 613: "Trying to relate PPLO to disease is very difficult. However, when PPLO are isolated in pure culture from the genito-urinary tract in which there is pathology, and antibiotics are given, and when, in 1 to 3 days the PPLO disappear and the clinical symptoms begin to subside, this is good circumstantial evidence that PPLO were causing the pathology." Studies on

PPLO-caused avian diseases have indicated that a superimposed physiological stress may be a requirement for the production of the disease state.

In addition to these important problems, the relationship of PPLO and L forms of bacteria is discussed. Of interest to those who are utilizing tissue culture techniques in their research are the discussions of the frequent contamination of cell lines with PPLO.

Radiopaque Diagnostic Agents. Annals of New York Academy of Sciences, Vol. 71, Article 3, pages 705-1020, 1959.

This colloquium presents an extensive survey of the past, present and possible future of radiographic media. The first series of articles discuss the historical development and the chemical and pharmacologic properties of the common, present-day media. Four articles describe experimental work in animals with heavy metal chelates and colloidal dispersions used as contrast agents. The initial results were mixed and somewhat disappointing. Excellent reviews of lymphadenography, spleno-portography with liver visualization, pancreatography, and radioisotopic liver and kidney up-take studies are included.

Various clinical and technical aspects of modern angiography are presented. Dr. J. Stauffer Lehman's evaluation of high concentrations of diatrizoate methyglucamine in angiography is particularly worthy of note. The effect of temperature, pressure, and catheter size on speed of delivery of the commonly available media is described in two succinct graphs.

The last group of four articles deals with the water soluble gastrointestinal contrast agents and the newer contrast agents for examination of the genitourinary tract in a general fashion, citing extensive clinical experience.

Virus Virulence and Pathogenicity. Ciba Foundation Study Group No. 4. Edited by G. E. N. Wolstenholme and Cecilia M. O'Connor. Boston: Pubished by Little, Brown, and Company, 1960.

During the past decade tremendous strides have been made in our understanding of viruses and their effects on the human host. From time to time interested investigators must meet and discuss problems of a general nature about which we know less than is desirable. In the present monograph, some of the leading virologists in the world met to discuss the concept of virulence and pathogenicity of viruses.

In the introduction, pathogenicity is defined "as the power to produce pathological affects in a host, and virulence as the evidence of pathogenicity derived from observation of the symptoms and signs, degree of illness or death of the host."

During the course of the conference various host-cell factors and human volunteer studies were discussed.

This monograph will be especially useful to the worker engaged in research in infectious diseases and to the practitioner who is inquisitive about current viral research and concepts.

A History of Neurology. By Walther Rieser, M.D. 223 pages. Price, $4.00. New York: MD Publications, 1959.

The author begins his discussion of neurology and its history with a consideration of various functions of the nervous systems. The precedence of structure to determine function, or function to determine structure, is discussed at great length in a somewhat theologic fashion. In like manner, the platonic and other doctrines regarding the soul are related to progress in neurology. Finally, various philosophic concepts of cerebral localization are presented.

Only passing mention is given to specific men and important developments in neurology. Brief reference is made to the development of ideas in the treatment of neurologic disorders.

The book is printed neatly, free from typographic errors, well indexed, and reasonably priced.

Although of interest to one concerned with the evolution of philosophic concepts in neurology, only the author's approach is presented. The book would not serve as a source of reference.

Women and Fatigue by Marion Hilliard, M.D., 175 pp., price $2.95, New York: Doubleday and Company, Inc., 1960.

Women and Fatigue, a posthumous sequel to the excellent **A Woman Doctor Looks at Love and Marriage**, is both a source book for physicians whose women patients ask, "Doctor, why am I so tired?", and a manual of suggestions for such patients. Chapter titles, such as "Fatigue Has Many Faces", "Common Sense and Calories", and "The Fallacy of the Shortcut to Vitality", indicate the practical nature of the author's approach; while titles such as "A Time To Be Born and a Time To Die" and "Love God and Do As You Please" are a guide to her philosophy. The simplicity of this approach is, however, an insufficient indication of the profundity of the thought and the breadth of experience in helping women patients conquer fatigue problems that is revealed in this small volume.

Zest for living, throughout the entire life's period is possible for women of all ages, married or single, is the thesis which runs throughout this book. Such zest comes from entering with verve every open door that offers a genuine opportunity. As there is a time to be born and a time to die, so, too, there is a time to be young and helpless, and a time for growing up; a time for falling in love; a time for growing older. Through meeting all experiences of joy, suffering, sorrow, contentment, achievement, and disappointment, the self develops into a mature person in step with chronological age.

It was this reviewer's privilege to have our second baby delivered by Dr. Hilliard. She was not only herself a vital person, but one became aware that through contact one's own revitalization was taking place. Dr. Hilliard never married, so she knew from personal experience the problems of the single woman in American society. She looked at these unblinkingly, and supported herself by such humor as "When night falls after a long day of seeing patients, I sometimes have a fanciful vision: all the married women are bitterly thinking up ways to avoid making love, and all the unmarried women are just dying to get at it" (page 108).

Dr. Hilliard lived for a "cause": to get women to work out an intellectual attack on their fatigue problems, and by overcoming them benefit family, friends, neighbors and community. Physicians, married or unmarried, male or female, will find themselves using this book to review and evaluate their own ways of treating patients who are bored, lonely, unable to love or to make love, the genuinely overworked, the secretly fearful or guilty, and the uncertain.

The Story of Dissection. By Jack Kevorkian, M.D., New York: Philosphical Library. 1959.

The author has neglected no period from earliest history to the beginning of the twentieth century in his anatomic considerations. In a very small volume a wealth of information has been presented, which makes not only engrossing reading, but serves as a valuable addition to reference material.

A sincere attempt has been made to explain the progress, or lack of progress, not only in dissection and the anatomical knowledge derived, but in medical science in general, in the light of existing conditions and opinions of each successive era. It is only to be regretted that more lengthy discussions could not have been included in this survey. Finally, the author is to be congratulated on the excellence of his composition and style.

The Teen-Age Years: A Medical Guide for Young People and Their Parents. By Arthur Roth, M.D. 288 pages. Price, $3.75. New York: Doubleday & Company, 1960.

This book is the result of six years of experience on the part of the author as founder-director of the Teen-age Clinic at the Kaiser Foundation Medical Center in Oakland, California. It deals specifically with medical problems of the adolescent. Among the topics discussed are problems of sexual maturing, skin care and grooming, orthopedic problems, and the vague ailments—"aches" and "tiredness"—common to young people. Dr. Roth also explores the standards of normalcy in adolescence and explodes what he calls "the false cult of the average": the teen-ager's acute worry that he is too tall, too short, too anything that is not "normal."

Dr. Roth received his M.D. degree from Western Reserve University and served his internship and pediatric residence in California and at Boston Children's Medical Center. The staff of his teen-age clinic at Oakland now numbers nine, and the case load has climbed from 25 to nearly 500 monthly.

Biological Stains—A Cross Index

A new technical reference booklet dealing with the uses of Biological Stains has been published by Allied Chemical's National Aniline Division.

The 12-page booklet cross-indexes an alphabetical listing of the principal uses of Certified Biological Stains and Biological Stains supplied by National Aniline, grouped according to the field in which the stains are used.

Since all biological stains certified by the Biological Stain Commission are obtainable from National Aniline, this comprehensive cross-index serves as a reference aid to the student of laboratory technology, the established laboratory technician and those engaged in general scientific research.

Copies of the booklet, "Biological Stains—A Cross Index," are available from Allied Chemical's National Aniline Division, 40 Rector Street, New York 6, New York.

Mead Johnson Announces New Hay Fever Drug

A new anti-allergic drug that protects the user against a wide range of allergic symptoms and itching for up to 12 hours on a single dose was announced at the American Medical Association's annual meeting recently.

The new agent is methdilazine hydrochloride. It was developed by Mead Johnson & Company of Evansville, Indiana, and is being marketed under the tradename Tacaryl. It is being introduced nationally simultaneously with the A.M.A. meeting announcement.

Tacaryl is available at drug stores on a doctor's prescription. It is being marketed as 8 mg. scored tablets in bottles of 100, and as a fruit-flavored syrup in 16 oz. bottles. Usual daily dosage is one tablet or two teaspoonfuls of syrup twice daily for adults, and one-half tablet or one teaspoonful syrup twice daily for children.

In Memoriam

William Wills Green, M.D.

William Wills Green was born on July 29, 1885, in Franklin County, North Carolina and was educated in the schools of that community, Horner's Military Academy, and the University of North Carolina, being graduated in 1908. He began the practice of medicine and surgery in Tarboro in 1910 and remained active until one month before his death on March 12, 1960. The only interruption in his practice was for service in the Army Medical Corps in World War I with the rank of Major. He was an active member of the County, District, and State Medical Societies and the American Medical Associaion for 50 years, and was a past president of the Edgecombe-Nash Medical Society. He was a member of the American College of Surgeons. He was an active member of the Howard Memorial Presbyterian Church of Tarboro and the Tarboro Rotary Club.

The death of Dr. Green has removed from us one of our most beloved and outstanding citizens. He loved people and in turn was loved by them. One had only to view the great mass of flowers and the crowd at his final rites to know that here indeed was a friend of man.

Dr. Green contributed of his time and talents in many ways for the betterment of Tarboro and Edgecombe Couny. Not only did he give of his outstanding professional skill to all, without regard to color or creed, social or financial standing, but he was always ready to help with anything that represented improvement and advancement for his fellow man. For 25 years he was chairman of the Edgecombe County Board of Education and undoubtedly to him goes a large share of the credit for our splendid school system. He worked tirelessly to raise money for improvement of the physical equipment and lived to realize his dream of seeing the one-room school house replaced by modern schools.

Several years ago when it became apparent that the existing local hospital facilities were inadequate, Dr. Green again gave his time and ability in helping plan a new hospital and worked hard and long in promoting the passage of a bond issue necessary for the construction of the new Edgecombe General Hospital. For 26 years he was Chief of Staff of the old hospital, a position he held in the new one at the time of his death.

A small insight into the character of this truly great man can be gotten from the fact that when the Tarboro Little League was formed, Dr. Green assumed the position of co-chairman of the finance committee, and each year personally went to business firms and individuals and solicited much of the money. Therefore

Be it resolved: That the Edgecombe-Nash Medical Society has lost a valuable member and each of us a true friend; and that we, the members of the Edgecombe-Nash Medical Society express our deep sorrow and extend sympathy to his family; and that a copy of these resolutions be placed in the permanent files of this Society, a copy be sent to his family, and a copy be sent to the North Carolina Medical Journal.

W. K. McDowell, M.D.
A. C. Norfleet, M.D.

The Month in Washington

(CONTINUED FROM PAGE 309)

Prior to approving the Mills plan, the committee rejected the Forand bill (three times) and the Eisenhower Administration's far-reaching public assistance alternative. Both plans were opposed by the medical profession and allied groups.

While these legislative proposals were in the limelight, a little-noticed bill was enacted into law to give $50 million in relief to taxpayers burdened with taking care of ill dependent parents.

The new law permits taxpayers full deduction on federal income taxes for medical and dental expenses paid for a dependent parent 65 years of age and older. Previously, such a deduction was limited to costs in excess of three per cent of the taxpayer's adjusted gross income.

Changes in the Social Security program called for in the catch-all bill approved by the Ways and Means Committee would:

1. Eliminate the requirement that a disabled person must be at least 50 years old to be eligible for Social Security benefits.

2. Provide Social Security benefits for about 25,000 widows of workers who died before 1940.

3. Increase the benefits of 400,000 surviving children of workers covered by Social Security.

Although all these revisions will increase costs of the program, neither the Social Security tax rate nor tax base was increased.

The revisions will mark the fifth consecutive year of a national election that the Social Security program, originally enacted in 1935, has been expanded. Some of the expansions have been accompanied by tax increases.



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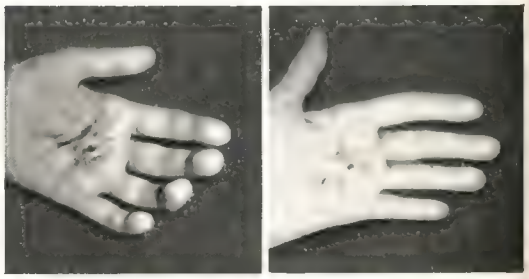
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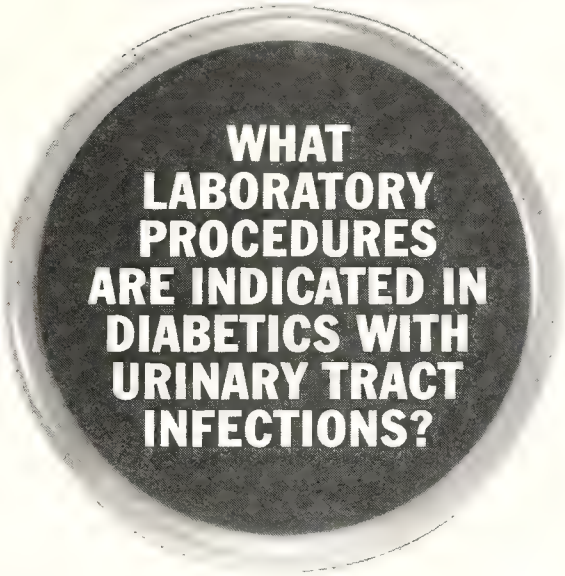
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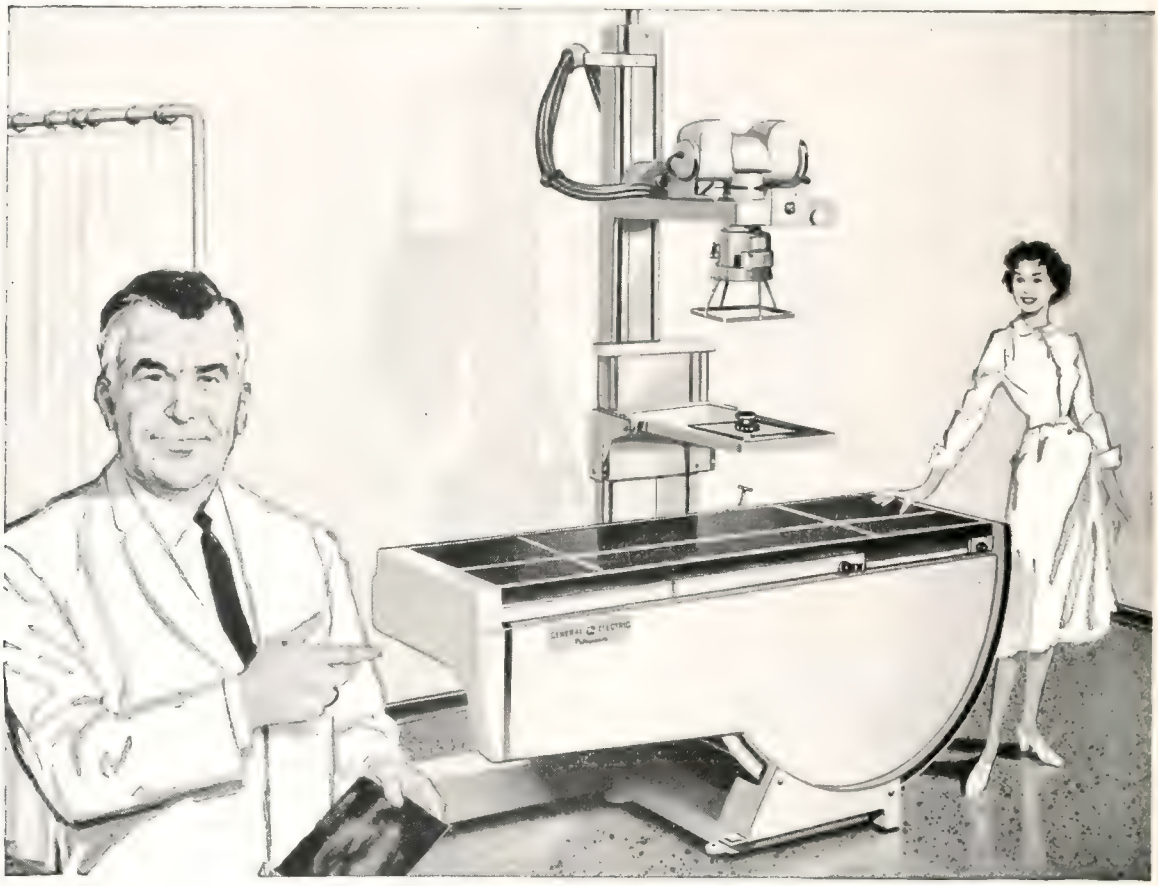
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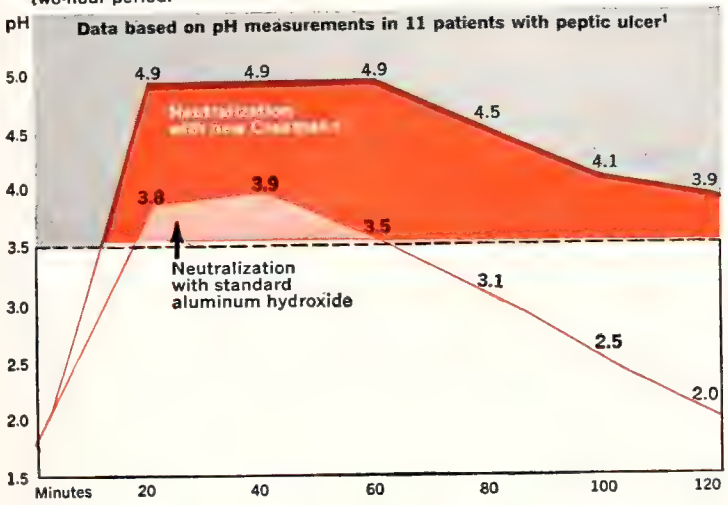
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1. Data in the files of the Department of Medical Research, Winthrop Laboratories. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: **J. Am. Pharm. A.** (Scient. Ed.) 48:384, July, 1959.

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Diagnostic Quandaries

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A DISEASE that is frequently overlooked in solving diagnostic quandaries is amebiasis. Its symptoms are varied and contradictory, and diagnosis is extremely difficult. In one study, 56% of the cases would have been overlooked if the routine three stool specimens had been relied on.[1]

Another study found 96% of a group of 150 patients with rheumatoid arthritis were infected by *E. histolytica*. In 15 of these subjects, nine stool specimens were required to establish the diagnosis.[2]

Webster discovered amebic infection in 147 cases with prior diagnoses of spastic colon, psychoneurosis, gall bladder disease, nervous indigestion, chronic appendicitis, and other diseases. Duration of symptoms varied from one week to over 30 years. In some cases, it took as many as six stool specimens to establish the diagnosis of amebiasis.[3]

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1. Cook, J.E., Briggs, G.W., and Hindley, F.W.: Chronic Amebiasis and the Need for a Diagnostic Profile, Am. Pract. and Dig. of Treat. 6:1821 (Dec., 1955).

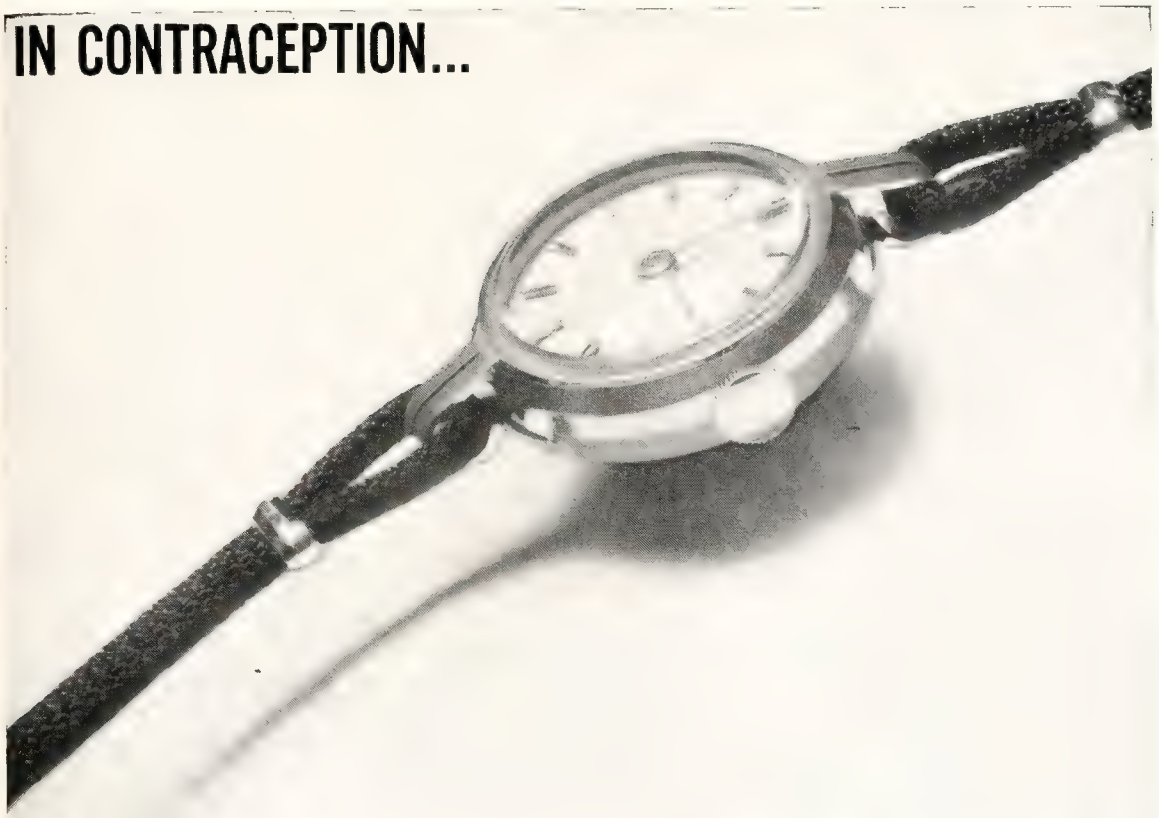
2. Rinehart, R.E., and Marcus, H.: Incidence of Amebiasis in Healthy Individuals, Clinic Patients and Those with Rheumatoid Arthritis, Northwest. Med., 54:708 (July, 1955).

3. Webster, B.H.: Amebiasis, a Disease of Multiple Manifestations, Am. Pract. and Dig. of Treat. 9:897 (June, 1958).

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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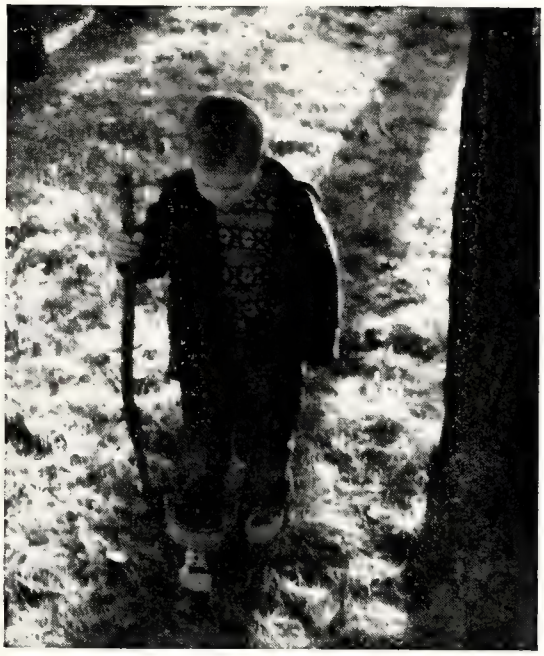
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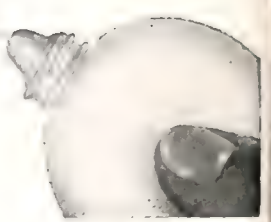
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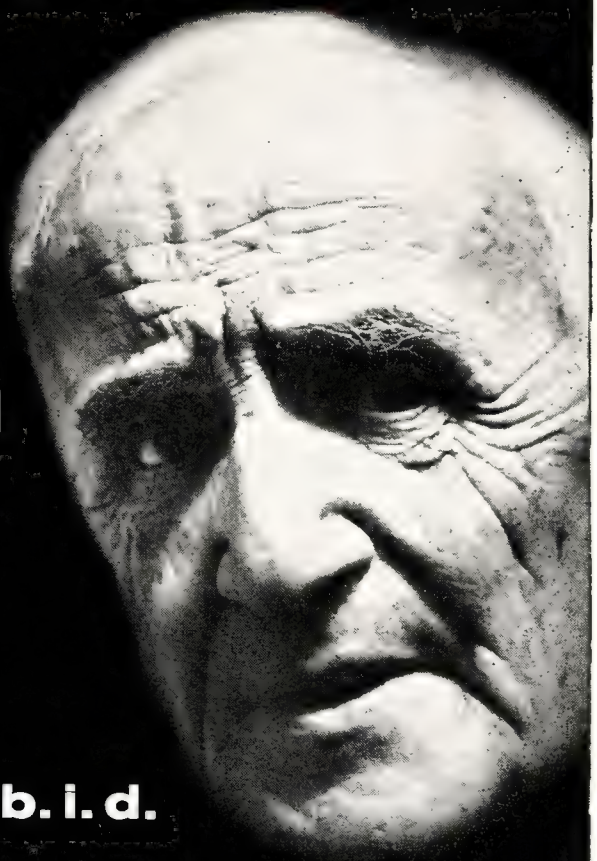
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In planning meals to maintain and extend productivity of the man in industry, *milk and milk products are foundation foods for good eating and good health.*

The nutritional statements made by this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

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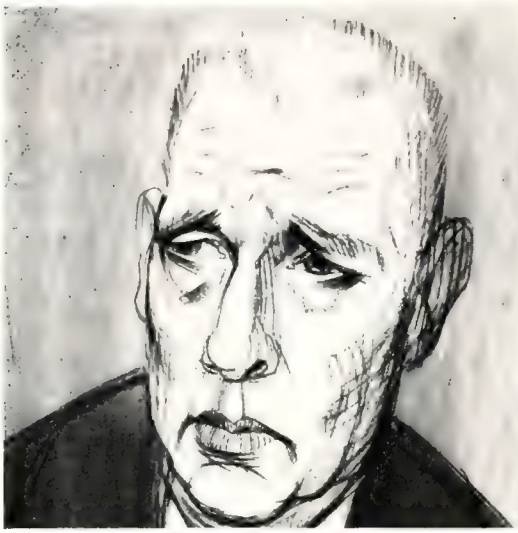
For, in a series of 766 cases of morning sickness, seven investigators report excellent to good results in 94%.[2] More than 60 million of these tiny tablets have been taken. The formula: 25 mg. Meclizine HCl (for antinauseant action) and 50 mg. Pyridoxine HCl (for metabolic replacement). Just one tablet the night before is usually enough.

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1. Projection from Vital Statistics, U.S. Government Dept. HEW, Vol. 48, No. 14, 1958, p. 398.
2. Modell, W.: Drugs of Choice 1958-1959, St. Louis, C. V. Mosby Company, 1958, p. 347.



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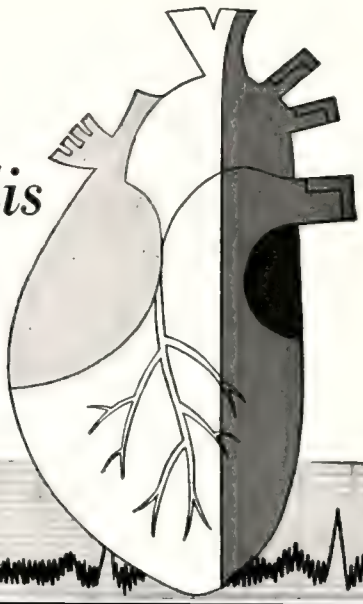
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Lown, B., and Levine, S. A.: Current Concepts in Digitalis Therapy, Boston, Little, Brown & Company, 1954, p. 23, par. 2.

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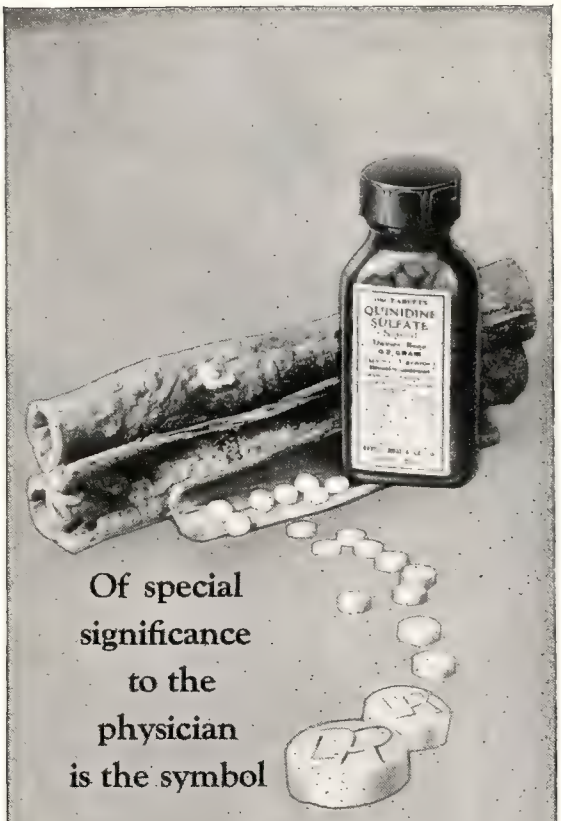
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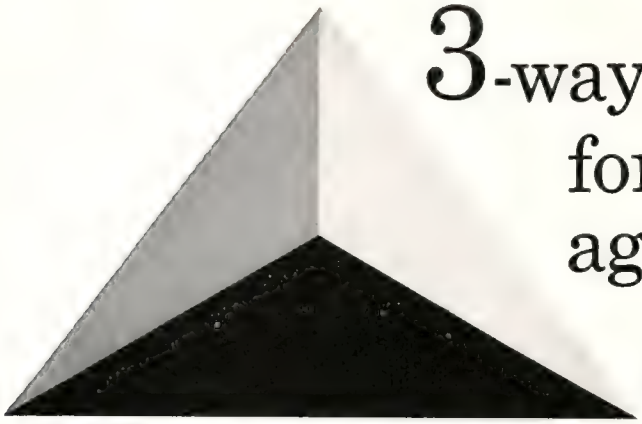
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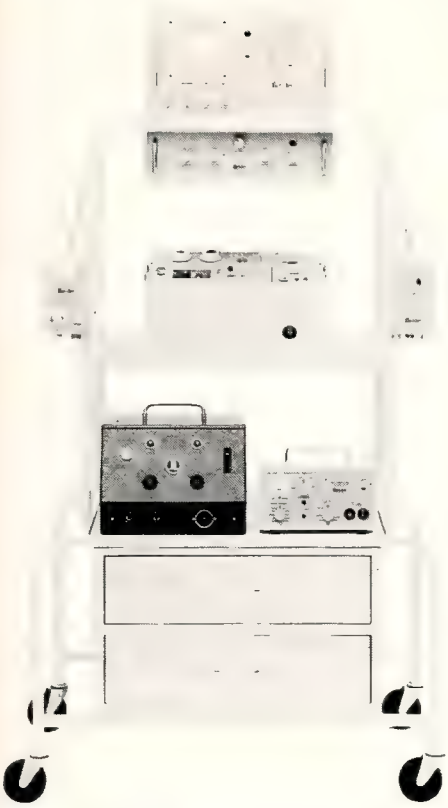


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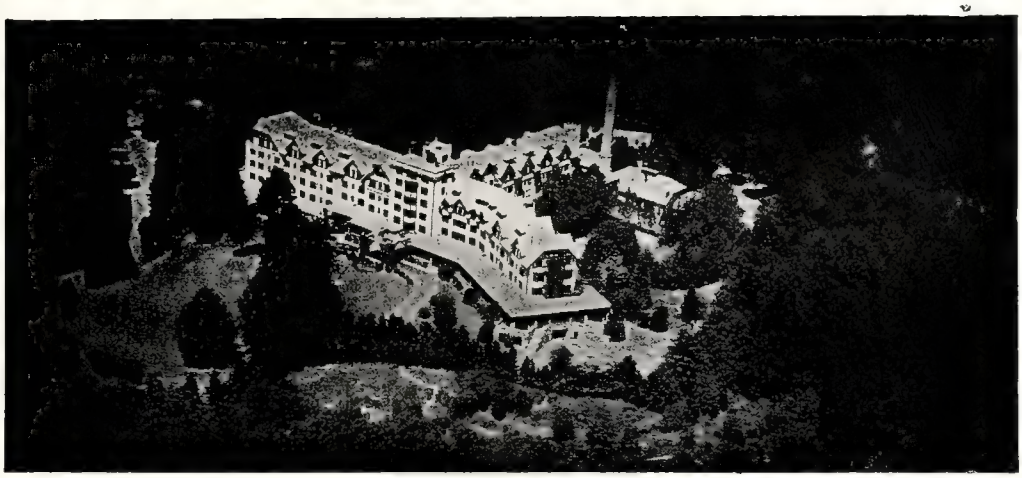
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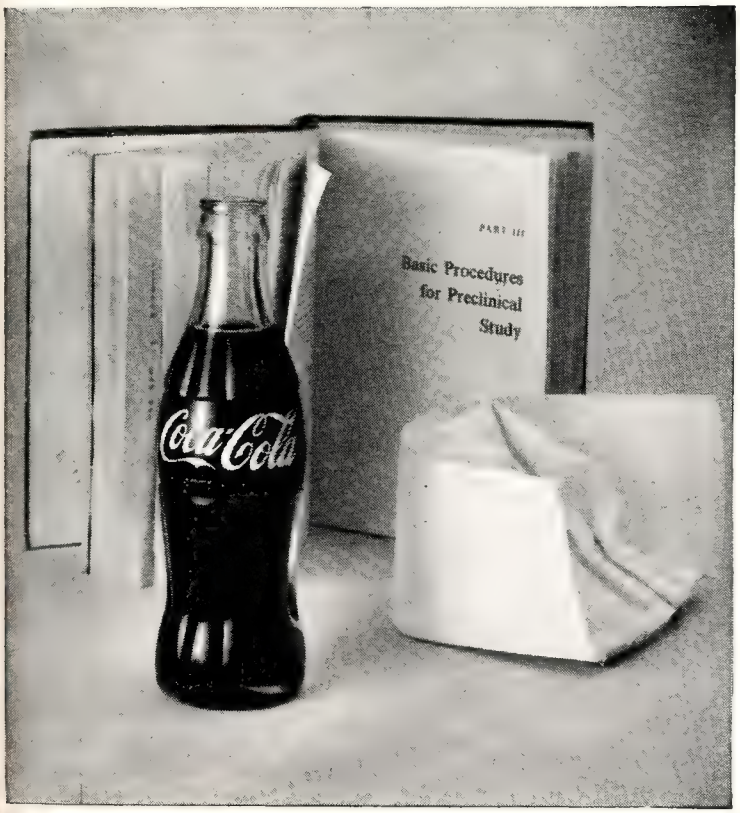
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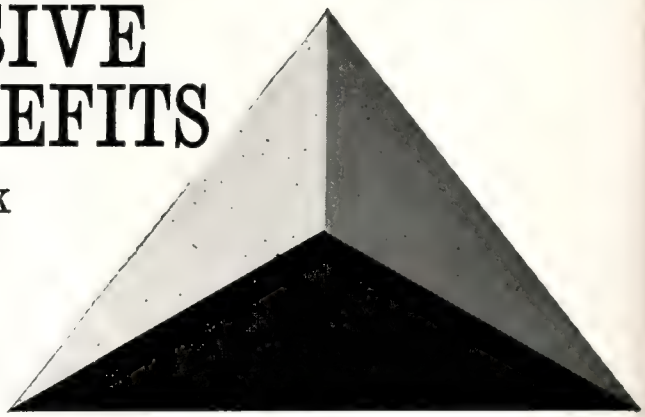
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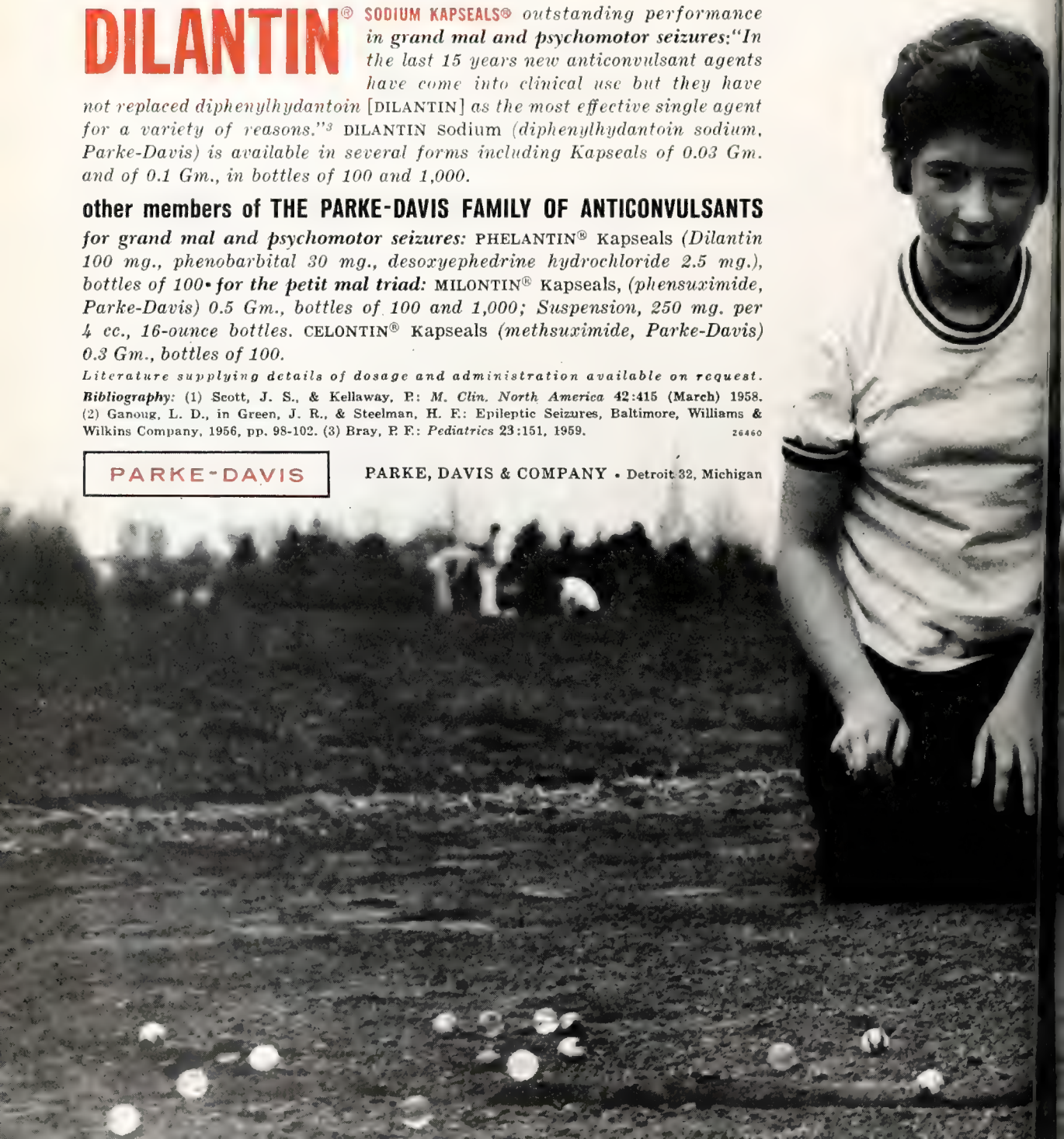
Literature supplying details of dosage and administration available on request.

Bibliography: (1) Scott, J. S., & Kellaway, P.: *M. Clin. North America* 42:415 (March) 1958. (2) Ganoug, L. D., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, Williams & Wilkins Company, 1956, pp. 98-102. (3) Bray, P. F.: *Pediatrics* 23:151, 1959.

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1. Goddard, E.S.: in *Trifluoperazine, Further Clinical and Laboratory Studies*, Philadelphia, Lea & Febiger, 1959.

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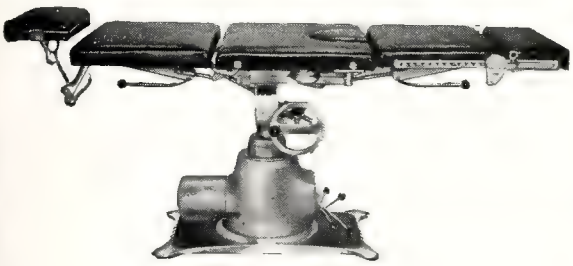
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Dietary Linoleic Acid and Linoleate—*Effects in Diabetic and Nondiabetic Subjects with and without Vascular Disease*

A paper by Laurance W. Kinsell, M.D., et al., excerpted from Diabetes—The Journal of the American Diabetes Association, May-June 1959

"*Linoleic acid as the major 'hypocholesterolemic agent' in vegetable fats.* The question has been raised as to the mechanism of lowering of the plasma lipids by a variety of vegetable fats. Among the entities present in or absent from vegetable fat which have been considered are: (a) the absence of cholesterol; (b) the presence of certain vegetable sterols; (c) the presence of certain vegetable phospholipids; (d) the nature of one or more of the fatty acids present; (e) the presence of trace materials.

n the diet

The absence of cholesterol has been excluded as a major factor.[5a] Phospholipids, if they contain a sufficient quantity of unsaturated fatty acids may produce a striking reduction. In our experience thus far saturated phospholipids fail to produce such an effect.[7]

Beveridge and his associates believe that vegetable sterols, particularly beta-sitosterol, are responsible to a significant degree for the cholesterol-lowering effect.[8] In our experience the vegetable sterols have a relatively weak and unpredictable effect of this sort.

Since the fatty acids of animal fats are predominantly saturated, and the fatty acids of most vegetable fats are predominantly polyunsaturated, with linoleic acid as the major component of the vegetable fats which lower cholesterol and other lipids, the question arises whether linoleic acid per se is capable of lowering plasma lipids. As reported previously[7] this is indeed the case. In a recent study in a young male with peripheral atherosclerosis in association with elevation of plasma cholesterol and of total lipids, ethyl linoleate produced a greater fall in the plasma lipid levels than had moderate amounts of natural sources of unsaturated fat. Linoleic acid, therefore, appears to be the most important single lipid-lowering component of vegetable fat.

* * *

Significantly higher levels of cholesterol were observed during oleate administration than during administration of equal amounts of linoleate. The relatively low cholesterol values during the second oleate period may have been related to linoleate stored in fat depots. The fatty acid composition of the cholesterol esters reflected the fat which was fed, i.e., the mono-enoic† acid content averaged more than 40 per cent during oleate feeding and less than 20 per cent during linoleate ingestion. Essentially, a mirror image of this resulted during linoleate feeding, at which time di-enoic acid predominated.

* * *

The data presented in this paper appear to establish that linoleic acid administered either as purified ethyl ester or as naturally occurring fat, in sufficient quantity, in properly constructed diets, will reduce plasma lipids to normal levels. The amount of linoleic acid required appears to bear a direct relationship to the amount of saturated fat included in the diet. Linoleic acid requirement may also bear a significant relationship to the amount of atherosclerosis present.

The transition from evaluation of the effect of dietary entities upon plasma lipids, to the evaluation of the effect of such materials upon vascular disease is difficult. However, such evaluation is not impossible. The requisites are adequate measuring sticks and well-controlled studies of sufficient duration. The duration of observation of effects of unsaturated fat in diabetic and nondiabetic patients with vascular disease is in no instance more than five years, and in the majority of instances, less than three. Our present impression is that improvement has occurred in some patients with atherosclerosis and with diabetic retinal and renal disease which was more than we would have anticipated in terms of the natural course of the disease. However, since it is well known that major fluctuations in these diseases can occur in individuals receiving no treatment, we believe it is appropriate at this time to say that no untoward effects appear to result when one prescribes diets containing large amounts of unsaturated fat for patients with such diseases, and it is not impossible that beneficial effects may be associated with such diets."

* * *

5a Kinsell, L.W., Partridge, J. W., Boling, L., Margen, S., and Michaels, G.D.: Dietary modification of serum cholesterol and phospholipid levels. J. Clin. Endocrinol and Met. 12:909, 1952.

7 Kinsell, L. W., Friskey, R., Splitter, S., Michaels, G. D.: Essential fatty acids, lipid metabolism, and atherosclerosis. Lancet 1:334, 1958.

8 Beveridge, J.M., Connell, W.F., Firstbrook, J. B., Mayer, G.A., and Wolfe, M.J.: Effects of certain vegetable and animal fats on plasma lipids of humans. J. Nutrition 56:311, 1955.

† Mono-enoic (mono-unsaturated) acid is presumably synonymous under these conditions with oleic acid and di-enoic (di-unsaturated) acid with linoleic acid

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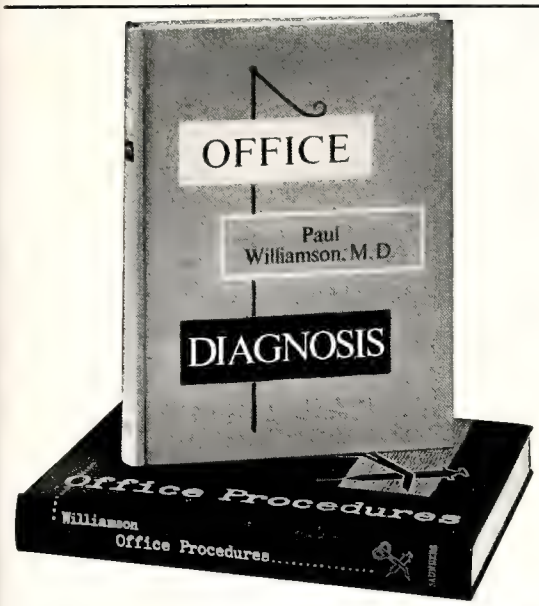
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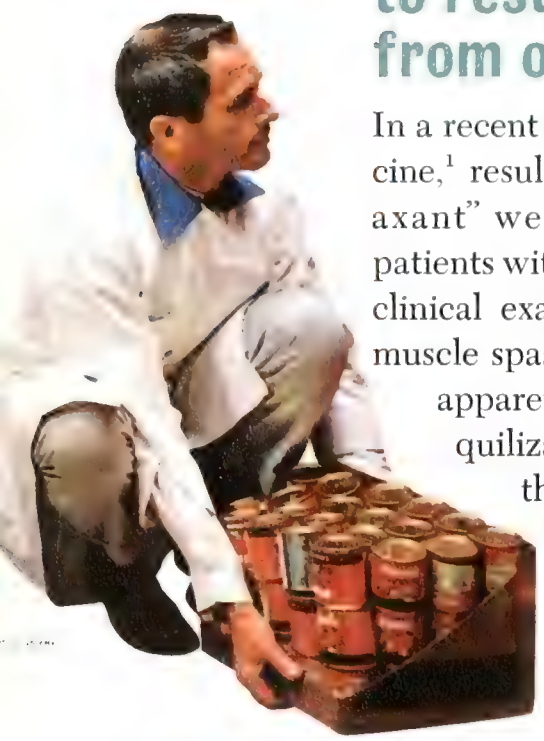
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1. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960.

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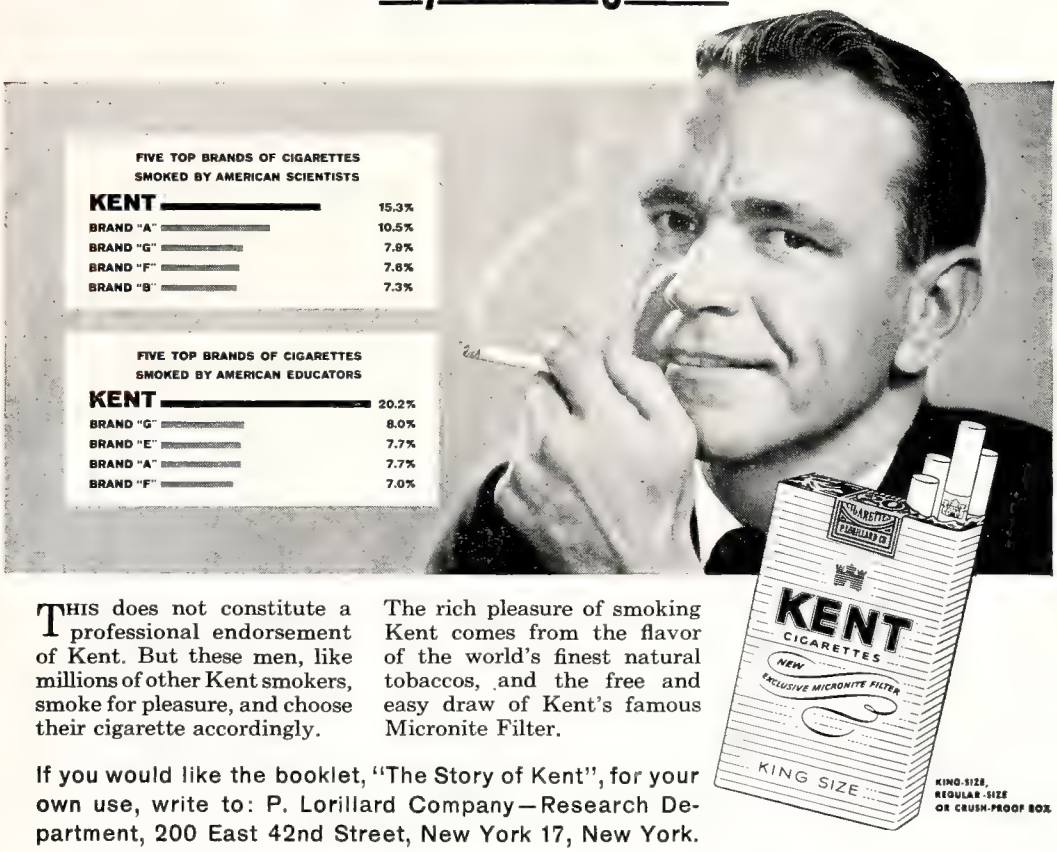
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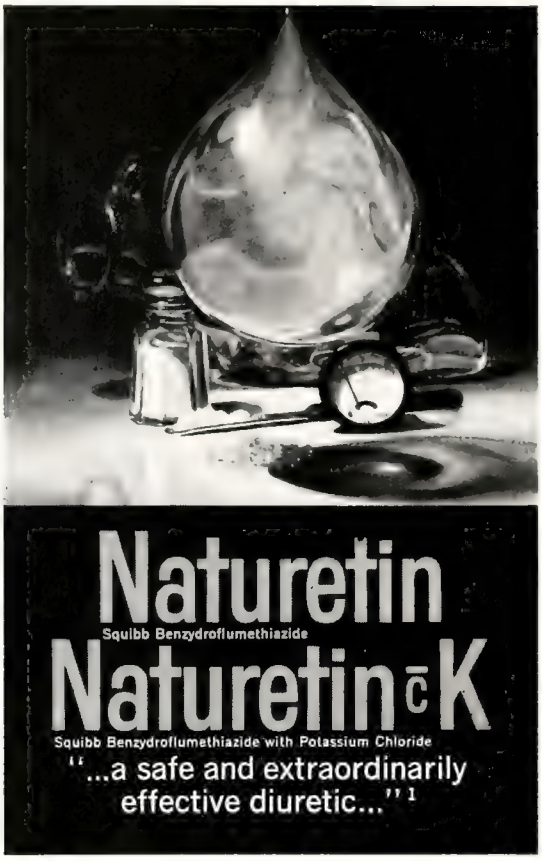
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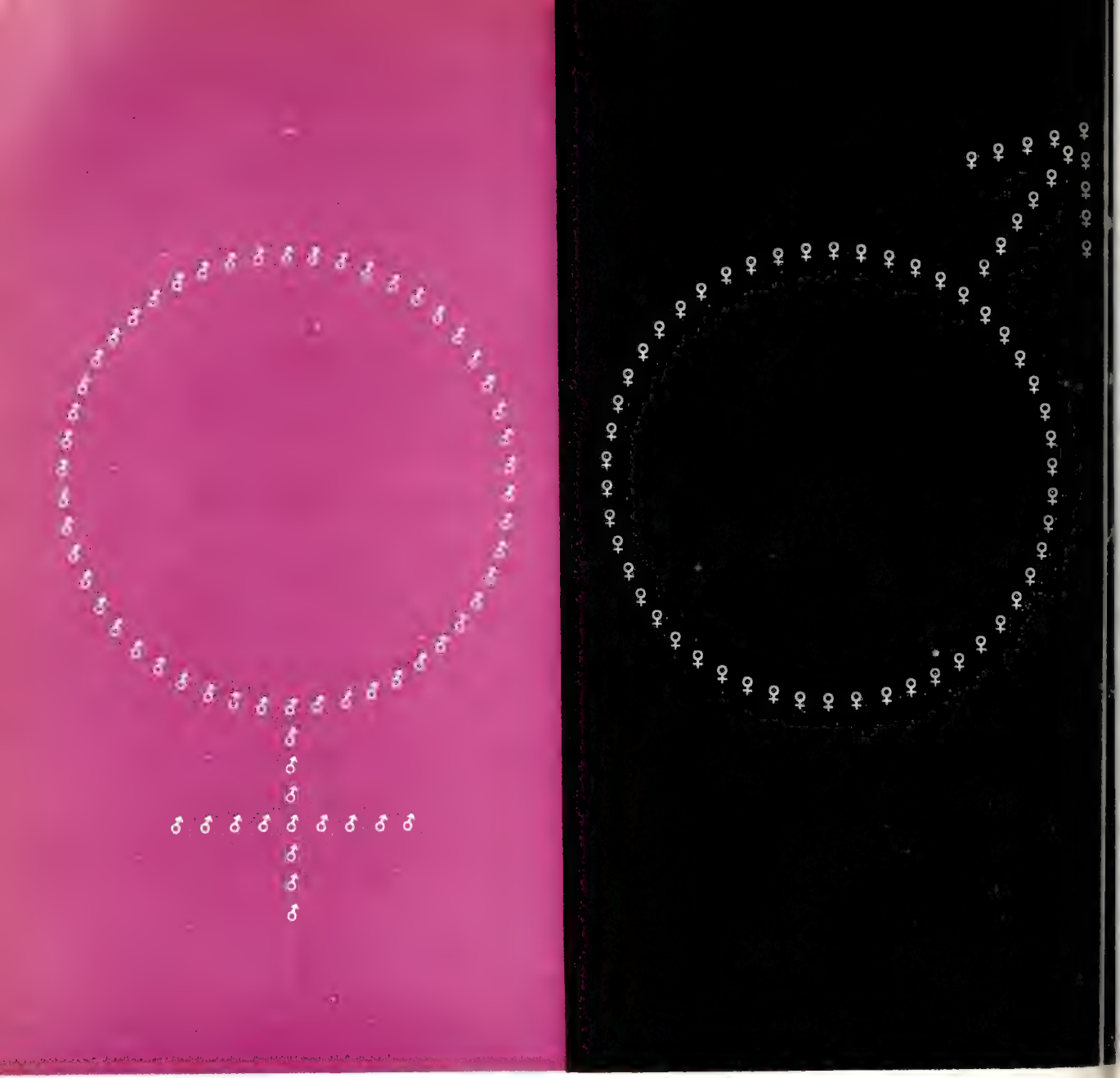
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* Marmell, M., and Prigot, A.: Tetracycline phosphate complex in the treatment of acute gonococcal urethritis in men. Antibiotic Med. & Clin. Ther. 6:108 (Feb.) 1959.

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*Knudsen, E. T., and Rolinson, G. N.: Lancet 2:1105 (Dec. 19) 1959.

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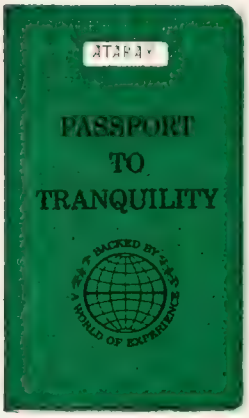
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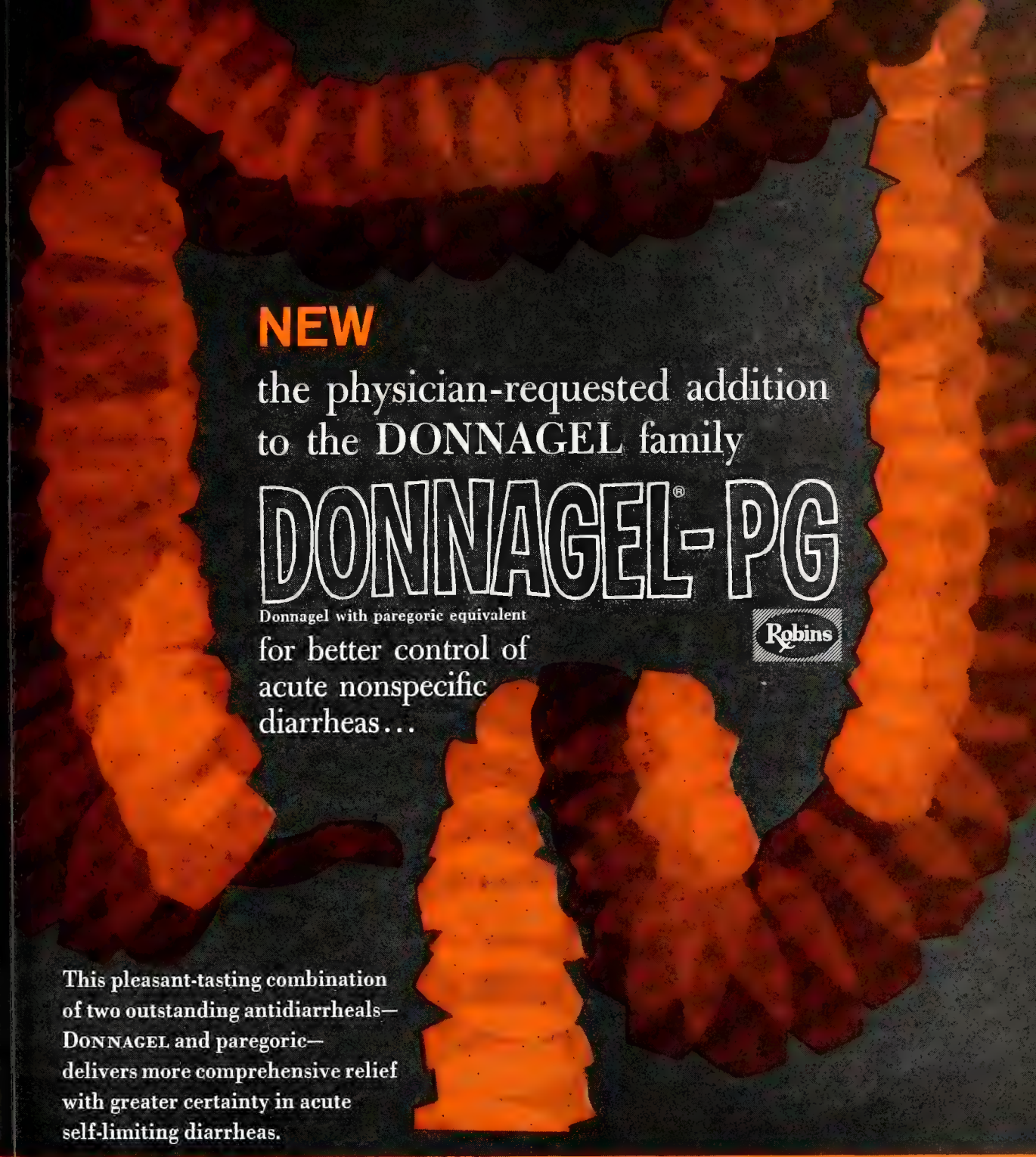
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VOLUME 21 AUGUST, 1960 No. 8

Symposium on Acute Surgical Conditions Of the Abdomen

Acute Abdominal Pain Associated With Vascular Emergencies

GORDON M. CARVER, JR., M.D.

DURHAM

Acute abdominal pain of vascular origin is still rare in comparison with that of appendicitis, peptic ulcer, and cholecystitis; however, as our population age increases, abdominal vascular emergencies will become more frequent. Most of these vascular lesions are of arterial origin and the earlier the diagnosis is made and definitive treatment instituted, the better the ultimate result.

Dissecting and Ruptured Abdominal Aortic Aneurysms

The abdominal aneurysm may be relatively asymptomatic until it begins to enlarge as a result of dissection. Varying degrees of severe pain in the abdomen or back then develops and is thought to be due to distention and tearing of the muscular layers of the aorta.

The diagnosis of dissecting abdominal aortic aneurysm is usually quite simple. Palpation of the abdomen reveals a pulsating mass which is often noted by the patient himself. A lateral roentgenogram of the lumbar spine may reveal calcification of the aortic wall and determine the diameter of the aneurysm. Angiography can be used to establish the diagnosis but is usually not necessary.

The clinical diagnosis of ruptured abdominal aortic aneurysm is made on the basis of an acute onset of abdominal pain, with or without shock, and the presence of a pulsating mass increasing rapidly in size. A flat plate of the abdomen may reveal an obliterated psoas shadow as well as calcification in the aneurysmal wall. Occasionally the blood hematacrit and blood pressure may be maintained at a normal level for several hours or even days after rupture of the aneurysm. The point of rupture is most commonly seen posteriorly, but it may be on the anterior or lateral surface of the aorta.

The treatment mortality rate in elective resections has diminished to such a point that it is sound to recommend removal of almost all abdominal aortic aneurysms on diagnosis. One of the most compelling reasons for resection is that more than 50 per cent of patients with ruptured aneurysms, although aware of the presence of the lesion, have had no symptoms prior to the rupture. In general the larger the aneurysm the greater the probability of rupture. Justification for the emphasis on elective surgery in these cases is the evidence that it increases life expectancy. DeBakey and Cooley[1] have shown a postoperative survival rate of 82 per cent. Wright and others[2], in their analysis of the natural course of the disease, found a steady decline in survival rates from 60 per cent at the end of one year to 16 per cent at the end of three years. There is of course little or no argument regarding the immediate indications for resection of dissecting or ruptured aortic abdominal aneurysms.

The surgical treatment consists of excising the aneurysm through a long xiphoid to pubic incision, replacing the excised segment

Presented before the Section on Surgery, Medical Society of the State of North Carolina, Raleigh, May 10, 1960.

of aorta with a synthetic graft made of teflon or dacron. Since most abdominal aneurysms arise distal to the renal arteries, the aorta can be cross-clamped below these vessels. Before the aorta is cross-clamped, the distal site of anastomosis is determined and these vessels are made ready for immediate anastomosis. In most cases the inferior mesenteric and lumbar arteries can be ligated and cut prior to the actual cross-clamping of either the iliac vessels or the abdominal aorta itself. During resection heparin is pumped into both lower extremities through a small polyethylene tube inserted into the distal arterial system by the use of special pumping apparatus or with syringe and three-way stop-cock. The aneurysm is then removed and the plastic graft sutured in place as rapidly as possible.

The resection of a ruptured aneurysm differs in that the patient is often moribund or in semi-shock. With adequate blood for replacement, temporary proximal control of the aorta is obtained by exerting pressure on the upper abdominal aorta against the spine in the lesser peritoneal sac and then placing an occluding clamp on the aorta below the renal arteries. The iliac vessels are cross-clamped and the ruptured aneurysm is rapidly removed. The smaller bleeding vessels are controlled and the graft is sewn in place. In all cases bilateral lumbar sympathectomy is performed prior to abdominal closure.

The mortality associated with resection of aortic aneurysms is about 5 to 10 per cent in the uncomplicated cases. In ruptured aneurysms it is still 25 to 50 per cent, depending on the patient's general condition at the time of surgery.

Dissecting Thoracic Aortic Aneurysms

The predominant presenting symptom of a dissecting thoracic aortic aneurysm may be acute epigastric abdominal pain. Usually the pain is substernal in origin and may simulate myocardial infarction; however, neurologic, renal and abdominal manifestations are frequent. These symptoms consist of numbness, paraplegia, coma, hematuria, and abdominal pain radiating to the legs or back and are usually related to the point of dissection, with involvement of the corresponding organ systems. The presence of neurologic symptoms or signs in patients with thoracic or abdominal pain may be a clue to the early correct diagnosis of a dissecting thoracic aortic aneurysm.

The physical manifestations of a dissecting aneurysm are not diagnostic. A precordial apical or basal systolic murmur is present in about 40 per cent of the cases. A diastolic murmur over the aortic area is considered to be of the greatest diagnostic significance, but is present in only a small percentage of cases. This is simply a reflection of the small number of individuals with involvement of the ascending aorta or aortic annulus. Brachial blood pressure differential, tracheal deviation, cervical venous distention, abdominal aneurysm, or obliteration of peripheral pulses is rarely observed. Electrocardiograms reveal myocardial ischemia, left ventricular strain, or disturbances of rhythm in about 75 per cent of the patients.

Roentgenograms of the chest usually reveal widening of the supracardiac mediastinum and radiolucence of the arch and descending aorta in the region of the false passage. Angiocardiograms taken with the patient in an oblique position usually accentuate the "double-barreled" appearance of the lesion. This examination has been of utmost value in determining the nature and extent of the dissecting progess.

For the cardiovascular surgeon, it is important to divide these lesions into five categories, which then provide a guide to the surgical approach and prognosis[3].

Type I: The dissecting process extends from the aortic annulus to a point well below the diaphragm.

Treatment: Unless there is an area where rupture is imminent, resection with graft replacement is not indicated. Creation of a re-entry passage is usually the procedure of choice and may be done with or without the aid of hypothermia or atriofemoral by-pass perfusion.

Type II: The process is localized to the ascending aorta and proximal transverse arch.

Treatment: Excision of the lesion and aortic graft replacement using extracorporeal pump oxygenator.

Type III: Distal transverse arch and descending aorta.

Type IV: The dissecting process arises at the left subclavian artery and continues well below the diaphragm.

Treatment: Excision of diseased thoracic segment and intraluminal closure of distal segment prior to replacement grafting.

Type V: Lesion occurs in left subclavian artery with dissecting process remaining localized in the descending aorta.

Treatment: Excision of the entire diseased segment and replacement with a graft.

The latter two types comprise about 90 per cent of the cases, and in each instance hypothermia or some form of by-pass-shunt is necessary to guard against spinal cord ischemia.

In DeBakey's series of 60 cases the operative mortality of lesions occurring below the subclavian was 18 per cent as compared to an over-all mortality of 29 per cent[3]. The most common type of lesion requires resection of the descending aorta, so as to include the site of origin of the dissection, with graft replacement and obliteration of the false lumen distally.

Aneurysms of Intestinal Vessels

Aneurysms of the major aortic branches to the abdominal viscera are usually palpable on physical examination, produce symptoms of abdominal pain, and have the great tendency to rupture common to all aneurysms. Splenic aneurysms occur in the main trunk of the vessel and are twice as common in women, particularly pregnant women. Splenomegaly is found in about 50 per cent of the patients, and before rupture, symptoms are mild, usually consisting only of epigastric discomfort. Rupture into the lesser peritoneal sac is followed by severe pain in the back and left shoulder, associated with shock or signs of peritoneal irritation. The treatment of choice is resection of the artery with the aneurysm, and splenectomy.

In aneurysms involving essential vessels such as the hepatic and superior mesenteric artery, resection with end-to-end anastomosis of the vessel is performed when possible. Small plastic grafts to the aorta can be used effectively when primary anastomosis cannot be performed.

Embolism and Thrombosis of the Superior Mesenteric Artery

The superior mesenteric artery is the vessel most often involved in infarction of the abdominal viscera in both sudden embolic occlusions and arteriosclerotic thrombosis. This is probably related to the relative size of the vessel, its anterior location, and the angle it makes with the aorta at its exit.

Superior mesenteric arterial embolism is usually associated with atrial fibrillation, a recent myocardial infarction, or some other disease which provides a source of emboli. Sudden severe cramping periumbilical or epigastric pain, frequently accompanied by severe pain in the upper lumbar and lower thoracic region, follows complete embolic occlusion. The patient appears to be in early shock and acutely ill, but the blood pressure may be normal or elevated. The bowel responds to acute ischemia with spastic contractions and loose mucoid stools. Within two hours the acute pain may subside, leaving the patient relatively asymptomatic. Unless the condition is recognized, the error may lead to a fatal postponement of operative treatment. The white blood cell count rises early, and the peritoneal irritation and abdominal tenderness make their appearance as necrosis of the intestine, and secondary bacterial invasion progresses. Signs of generalized peritonitis with abdominal distention, shock, and leukocytosis develop, to complete the classic picture of massive intestinal infarction. Paracentesis may yield a characteristic dark, "prune-juice" type of fluid.

Early recognition of the entity and prompt surgical removal of the embolus before irreversible injury to the bowel has taken place is the treatment of choice. Reports of successful superior mesenteric embolectomy have appeared with increasing frequency since the urgency and value of the operation was stressed by Klass[4].

A typical history in a patient liable to emboli, who begins to have acute abdominal pain and tenderness, leukocytosis, and guiac-positive stool with absence of small-bowel gas on x-ray, should immediately define the need for emergency surgery. The reversibility of apparently severe degrees of ischemic injury to the intestine after sudden occlusion of the circulation has been striking. Dark discoloration of the bowel does not necessarily mean necrosis. Even if necrosis of segments of the small bowel has advanced to a point of no return, the combination of embolectomy and bowel resection may allow the preservation of a greater length of small intestine.

Technique

When the abdomen is explored early, there may appear to be very minor changes in the circulation to the small bowel. A good pulse in the main superior mesenteric artery must be demonstrated. The ligament of Treitz is identified and the mesocolon and lower border of the pancreas are reflected upward,

exposing the superior mesenteric artery. A heavy ligature is passed around the main trunk of the artery to elevate it, and the first jejunal and middle colic branches are exposed. A longitudinal arteriotomy incision is made and the clot is removed proximally as far as its aortic origin. A bulldog arterial clamp is applied after the vessel has been cleared by a flush of aortic blood. The distal thrombus is then removed by milking the mesenteric vessels toward the arteriotomy incision. Heparin is injected into the vessel proximately and distally, and the incision is closed with No. 6-0 black silk. Anticoagulants are used in the postoperative period, along with antibiotics and the usual surgical measures that are employed after an exploratory laparotomy.

Arteriosclerotic Thrombosis of the Superior Mesenteric Artery and Vein

Small-bowel infarction resulting from arteriosclerotic thrombosis of the superior mesenteric artery usually occurs by gradual occlusion of this vessel, and will be preceded by days or months of chronic gastrointestinal symptoms. The most prominent symptom is a cramping epigastric pain appearing an hour or two after meals; weight loss is due to failure to eat because of this pain. Malabsorption may result in the fatty frothy stools which characterize this disorder. Infarction will be accompanied by a severe attack of abdominal pain, but is apt to be less dramatic in onset than are the symptoms present with sudden embolic occlusion.

Treatment would ideally consist of recognition in the prodromal phase, aortographic demonstration of narrowing of the vessel, and correction by thromboendarterectomy or replacement grafting. The atheromatous occlusion is almost always located in the first centimeter and the adjacent aortic wall[5]. The vessel is cleared in a retrograde fashion with a small curved clamp introduced into the aortic lumen through the superior mesenteric arteriotomy. Hemorrhage from the vessel is readily controlled by digital pressure between extraction efforts. The arteriotomy is closed, with attention given to distal atheromas, tacking down or including in the suture line the distal intima to avoid subsequent dissection.

Thrombosis of the mesenteric vein is a rare condition usually associated with intra-abdominal infection. The diagnosis is difficult to make but is suggested by an episode of subacute abdominal pain associated with the passage of blood and mucus per rectum. Specific surgical treatment depends on the underlying cause and the location of the vascular block.

Aortic Saddle Embolus

The classic evidence of a saddle embolus of the aorta is sudden vascular insufficiency of the lower extremities denoted by pain, pallor, sensory and motor losses, and absent pulses. There may also be pain in the abdomen, lower back, buttocks or perineal region, or paresthesia depending upon the adequacy of the collateral circulation. The embolus usually arises from a thrombus in a rheumatic heart with mitral stenosis or insufficiency and atrial fibrillation, or from a mural thromus secondary to myocardial infarction.

The prognosis for both life and limb is poor without embolectomy. Reich[6] reported that only 1 of 7 patients not operated on survived. Burt and others[7] had a similar experience with 16 patients, 8 of whom were treated conservatively; only two lived without loss of legs. Four of 8 were operated on successfully without loss of limbs. In general the longer the delay prior to operative removal of the embolus, the poorer the prognosis, although emboli have been removed after a delay of 24 hours[8].

The operative approach may be transabdominal, retroperitoneal from the left side, or by retrograde catheter suction of the femoral artery. The transabdominal approach, employing a mid-line or paramedian incision, is the most popular. After proximal control of the aorta above the bifurcation and the iliac vessels below the embolus, a longitudinal incision is made in the aorta overlying the clot. The embolus is removed and blood is allowed to flush from both iliacs to clear these vessels and check their retrograde flow, and then to clear the distal aorta. The aortic incision is then closed with continuous No. 5-0 silk sutures. In draping the patient prior to operation, it is important to have both legs and feet in the operative field so that peripheral pulses can be determined immediately following removal of the embolus by the operating surgeon. The femoral or popliteal arteries can be explored, if necessary, to clear them of small emboli that may have broken off from the saddle embolus.

The retroperitoneal approach from the left side can be used in the presence of peritonitis or extensive intraperitoneal adhe-

sions, but it has the disadvantage of poor exposure of the right iliac artery and of the operative site in general.

The retrograde femoral artery approach[9] possesses the disadvantage of a blind, indirect method, yet may be performed successfully with local anesthesia, thereby avoiding a laparotomy in a seriously ill patient. In a recent study Willman and Hanlon[10] recommend this technique not only for those patients who are critically ill, but in all patients. If the clot is not extracted successfully, the patient can be put to sleep and a transabdominal approach used. These authors point out that unsuccessful attempts at retrograde femoral removal by other operators have been due in many instances to the use of small catheters.

The largest thin-walled plastic catheter that the vessel will accept is passed until the catheter impinges on the embolus. A glass T tube allows blood from collateral vessels to flow through the vent until the catheter tip reaches the embolus· then the suction line is opened and the vent is closed. Aspirated blood and thrombus are seen through the glass T tube. The catheter is slowly withdrawn, together with the firm embolus held against the tip of the catheter by suction. The same technique is used on the other side and is repeated until there is a vigorous pulsital blood flow. This method was used successfully on 4 patients, but cannot be used on patients with previous obstructions or thrombosis in the iliac vessels.

In the postoperative management immediate heparinization is not used routinely after the abdominal approach if adequate luminal clearance has been accomplished. The complications associated with immediate heparinization in terms of wound bleeding, hematoma, delayed wound healing, and secondary infection appear to outweigh its possible advantages. After the retrograde femoral artery approach, however, immediate heparinization is utilized.

If the embolus arises from the left atrium owing to mitral stenosis, mitral commissurotomy and atrial appendectomy is preferable to long-term anticoagulant therapy if the patient can tolerate the procedure. One advantage of the retrograde femoral approach is that after its completion under local anesthesia it can sometimes be combined immediately with mitral commissurotomy. Belcher and Somerville[11] found a less than 1 per cent incidence of postvalvulotomy embolism in 430 collected cases, and felt that commissurotomy was much preferable to long-term anticoagulant therapy.

Summary

Acute abdominal pain of vascular origin is most commonly due to the development of an aneurysm, thrombosis, or embolus in the arterial system within the abdomen. In general the earlier the diagnosis, the better the result of surgical treatment.

The diagnosis of dissecting or ruptured abdominal aneurysms is not difficult, as the pulsating mass can usually be felt. Resection of the aneurysm with graft replacement is a lifesaving procedure when successful.

Dissecting thoracic aortic aneurysms may masquerade as an acute abdominal condition, diagnosis can usually be made by x-ray studies, and surgical treatment consists of resection with graft replacement or construction of a re-entry passage.

Embolism or thrombosis of the superior mesenteric artery may be treated by embolectomy or thromboendarterectomy if recognized early, thus avoiding infarction of the small bowel.

Diagnosis of aortic saddle embolus in its early stages and the use of modern vascular surgical techniques have improved the salvage rate considerably in the past 10 years.

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Diagnosis and Treatment of Intussusception in Infants and Children

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Intussusception is the invagination or telescoping of a portion of bowel into the bowel distal to it. It occurs usually in the region of the terminal ileum, being of the ileo-colic type; but colo-colic, ileo-ileal, and the treacherous and complicated ileo-ileo-colic types are occasionally encountered.

The mesenteric blood vessels are pulled in between the layers of bowel and subsequently obstructed by tension and pressure. The result is a strangulating process of the intussuscepted portion and a mechanical obstruction of the innermost lumen from the resultant edema of the bowel wall.

If left untreated, 95 per cent of the patients will die. The few who recover do so by a spontaneous reduction or a sloughing of the gangrenous portion into the distal bowel, with relief of the obstruction.

Intussusception is an acute painful abdominal condition and a discussion of it fits in well with the other papers presented on this program. It is, however, unique among the subjects covered in that it occurs principally in infants and children. As such, the discussion of it can serve as a reminder of the value of modifying for infants and children the procedure of physical examination usually followed in adults.

Intussusception furthermore is a condition about which there is no complete agreement as to the best form of treatment. Ravitch[1] has emphasized again the value of a barium enema under hydrostatic pressure as the initial therapy prior to any operative approach.

Our experiences with 22 cases at the North Carolina Baptist Hospital will be summarized.

Diagnosis

Some 80 to 90 per cent of reported cases of intussusception occurred in children under 2 years of age, the majority ranging between 3 and 11 months. The patients are, therefore, old enough to complain but too young to describe their complaints.

The mother usually states that the baby had been entirely well until suddenly he began to have severe attacks of "colic," characterized by an agonizing cry of pain, pallor, a drawing up of the legs upon the abdomen, and vomiting. This might last 30 seconds to a minute, followed by apparent relief for minutes to hours, only to be repeated again and again until the baby looked limp, refused all feedings, and perhaps became distended. A normal bowel movement might occur, and after several hours there may be some blood, bright red or the dark, so-called "currant jelly" type, mixed with the stools.

It should be emphasized that blood in the stools is not an early manifestation, for when it does occur it is an indication of considerable venous obstruction in the involved bowel, causing ulceration and bleeding of the mucosa. The symptoms are suggestive enough of intussusception before blood appears, yet experience has shown that the appearance of blood does not mean that the bowel is gangrenous and that resection will be mandatory.

The important positive sign during examination of the abdomen is the presence of an elongated or sausage-shaped, only slightly tender, mass anywhere along the course of the colon. This may vary in size with peristaltic activity, or be constant in size and definitely tender, indicating more edema and a more severe impairment of the blood supply. A relative emptiness of the right lower quadrant, known as Dance's sign, is difficult to interpret, but if present suggests that an elusive mass may be hiding either under the liver edge or under the left rib cage at the splenic flexure.

Peristalsis will be that of small bowel colic, and when it is heard, the child will at the same time tighten his abdominal muscles and cry until the episode is passed.

Method of Examination

Examination of the "acute abdomen" in an inarticulate, uncooperative, frightened, crying, irritable, sick baby can be a difficult and unrevealing procedure unless the routine is modified from that used in adults.

A general inspection of the baby will reveal by his color, attitude, and activity whether he is acutely ill and whether his

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abdomen is distended or a hernia protrudes. If the baby is lying quietly in his mother's arms when first seen, then is the opportune time to place the stethoscope gently on the abdomen to determine peristalsis and, if he remains quiet, to listen to the anterior chest.

Gentle and light palpation with a warm hand comes next. If there is no distention, it is usually easy to determine the presence of muscle spasm or a palpable mass. It is gratifying to find that if this initial palpation is gentle, light, and slow, any response from the baby such as a whimper, a squirm, a facial wince, or a sudden tightening of the musculature is a reliable sign of tenderness beneath the palpating hand. These actions can speak as loudly as words to say, "That hurts." If at the first such sign the examiner removes his hand, the baby will usually become quiet again. More thorough palpation of the non-tender areas can then be repeated, and finally the tender area confirmed.

Percussion of the abdomen can be as much a test for rebound tenderness as for tympany or shifting dullness. If done very gently, it too can localize the tender area by the same responses.

But what if the baby is crying and tossing when first seen, and, as often happens, has been taken from his mother, disrobed, held naked on a cold table, and a thermometer thrust up his rectum? Or what if one gags his throat, pokes his ears, twists his neck, turns him over, and thumps his chest before examining his abdomen?

There is only one answer. The baby must be quieted down and relaxed before the abdominal examination can be satisfactory. Maybe a few minutes in his mother's arms will do it. If he isn't vomiting, maybe a bottle or a sugar nipple will do it. But it may also take a pentobarbital suppository or a subcutaneous injection of Demerol (1.0 mg. per pound) 20 or 30 minutes to do it. If such sedation seems necessary, it should be used for the good of everybody concerned.

Certainly a complete examination should be done, but in an order and a manner that allows a thorough abdominal examination in a quiet, relaxed child. The final rectal examination is done not only to check for blood but also for tender masses. At times the leading point of an intussusception, like a small cervix, can be felt within the rectal ampulla.

Differential Diagnosis

There are no other conditions that present the findings of a typical intussusception. But sometimes the signs of small bowel obstruction are dominant, and the distention prevents palpation of the intussuscepted mass. An ulcerated Meckel's diverticulum alone or a polyp can cause bloody stools, and appendicitis and all forms of acute enteritis must be thought of.

When the diagnosis of intussusception is suspected but no abdominal mass is palpable, a barium enema for diagnosis alone will settle the issue and at times will cure the disease. The retrograde flow of barium will slow at the leading point of the intussusception, then outline it with the "coiled spring" sign, and sometimes reduce it in seconds.

Treatment

Basically the treatment of intussusception is that of relieving an intestinal obstruction at the point of the obstruction. Supportive measures to correct dehydration and relieve intestinal distention should, of course, be started as soon as the diagnosis is made.

The only controversy seems to be whether an initial trial at reduction by a barium enema under hydrostatic pressure is safe and effective. Even the opponents of such a trial[2] admit they have seen barium enemas given primarily for diagnosis cause ready reductions and obviate an operation. These have occurred principally in patients seen within 24 hours of the onset of symptoms.

Ravitch[1,3,4] in urging the routine trial of this method, presents convincing evidence from Scandinavian and Australian clinics and from his own experience that it is effective in 3 out of 4 cases and is attended by much less morbidity and mortality than operative treatment alone. He reports no deaths in 65 patients so treated, and in cases of successful reduction by the enema the hospital stay was only one-third as long as those requiring operation.

He refutes the objections of others by pointing out that with his method irreducible bowel will not rupture nor a gangrenous one be reduced. There is less trauma to the bowel itself than by manual reduction. There will be a correctable cause, such as a polyp or Meckel's diverticulum, in only 5 per cent of the patients, and none of these require immediate removal. If complete reduction is not successfully demonstrated, there is no delay; surgical exploration is performed immediately through a McBurney incision.

Table 1
Symptoms and Signs
22 Cases

	No.	Per Cent
Intermittent abdominal pain	22	100
Vomiting	22	100
Bloody stools	16	73
Palpable abdominal mass	14	64
Abdominal distention-obstruction	4	18

He finally stresses the point that this is a hospital surgical procedure and can be simply compared to an initial attempt at a closed reduction of a fracture. If not successful, open reduction may be necessary. Physicians will refer suspected cases sooner, and parents will readily agree to early hospitalization if by so doing there is an excellent chance of cure without an operation.

Technique

Ravitch's method in the use of barium under fluoroscopic control may be summarized as follows: (1) Insert a 45 cc. Foley bag catheter in rectum; (2) maintain a 3-foot elevation of barium reservoir; (3) persist with constant pressure if progress made; (4) proceed with surgical exploration if ileum is not well filled; and (5) instill powdered charcoal into the stomach if reduction is apparent.

His criteria of reduction are: (1) free flow of barium into small bowel; (2) return of feces or flatus with barium; (3) disappearance of mass; (4) clinical improvement, and (5) recovery in stool of charcoal.

Summary of Cases

Twenty-two cases of intussusception in the pediatric age group have been seen at the North Carolina Baptist Hospital from 1946 through 1959. This represents 20 patients, 2 having been admitted twice for a recurrence of the condition. There were 14 males and 6 females. Thirteen were between the ages of 3 months and 2 years, 6 from 2 to 4 years of age, and 3 from 5 to 10 years of age.

The predominant signs and symptoms are noted in table 1. The duration of symptoms from onset to initiation of treatment varied from four hours to four days. The correct diagnosis was suspected clinically in all patients except the 4 showing predominantly the signs of small bowel obstruction.

Our only death was in one of these, a 3 year old girl who was admitted with a four hour history of intermittent abdominal pain and vomiting, preceded the day before by passage of a bloody stool without pain. The abdominal examination revealed no masses, or tenderness, but peristaltic rushes were heard that coincided with apparent pain. No blood was found in the stools. A plain roentgenogram of the abdomen was not diagnostic. After a 24-hour delay during which symptoms progressed, a diagnostic barium enema revealed an intussusception in the cecum. At operation an ileo-colic mass was reduced, and a gangreous portion of ileum containing an ectopic pancreatic nodule was resected. Hyperpyrexia and convulsions developed during the procedure and the patient died two hours later. An autopsy was not obtained.

Table 2
Treatment
(22 Cases)

Nonoperative reduction	
Spontaneous	2
Plain enema	2
Barium enema	3
Total	7
Operative treatment	
Exploratory (obstruction already reduced)	3
Manual reduction	8
Resection or extoriorization	4*
Total	15

* 1 death: operative mortality 7%

Only 15 of the cases required operation, table 2. The clinical diagnosis in the 4 that were reduced spontaneously or by plain enemas was certain enough to be included in the group. Diagnosis of the other 3 was confirmed at the time of reduction by barium enema. The one death gives an operative mortality of 7 per cent and an over-all mortality of 4.5 per cent.

Table 3
Etiology
15 Operative Cases

Antecedent diarrhea	2
Hyperplastic Peyer's patch	2
Meckel's diverticulum	1
Ectopic pancreas in ileum	1
Papilloma of cecum	1
Mobile cecum	1
Prominent ileo-cecal valve	1
Recent bowel surgery	1
Idiopathic	5

Probable etiologic factors in the 15 operative cases are listed in table 3. The hyperplastic Peyer's patches seemed to be the leading points in 2 cases, and in each the appearance of the mesenteric nodes was compatible with a coincident diagnosis of mesenteric adenitis.

Barium enema examinations were done in 13 patients. The other 9 included those who improved spontaneously or after a plain enema and those who were considered candidates for exploration for severe obstruc-

Table 4
Barium Enema in Intussusception

Attempted reduction	11	
Successful—no surgery	3	27%
Successful—proved at surgery	2	
Unsuccessful—operative treatment	6	

tion. In only 11 was any attempt made to reduce the intussusception by hydrostatic pressure, table 4. This was successful in only 3 patients (27 per cent), symptoms having been present 12 hours in 2 and 4 days in the third. In 2 additional cases operation disclosed complete reduction, even though the terminal ileum had not filled with barium. Symptoms had been present less than 12 hours in each of these cases.

Comment

The two recurrent cases are of interest. In one, the first episode occurred at 13 months of age, and after an unsuccessful attempt at reduction by barium enema an ileo-ileo-colic type of intussusception was reduced at operation. When similar symptoms recurred at the age of 3 years, exploration was done without a preliminary enema and an ileo-ileal type was found to have been reduced spontaneously.

In the other the first episode occurred at 16 months of age, barium enema was unsuccessful, and an ileo-colic type of intussusception was easily reduced at operation. The intussusception recurred at the age of 2½ years, was easily reduced by a barium enema, and the patient was discharged 48 hours later. Three months later she had a third episode of intermittent pain, vomiting, and passage of a grossly bloody stool during a 12-hour period. She then improved spontaneously, and four hours later examination of the abdomen was normal and barium enema showed no intussusception. A barium study of the small bowel was subsequently normal. When seen recently at age 14, she had had no further trouble. Undoubtedly, the third attack was due to another intussusception which was reduced spontaneously.

These 2 cases illustrate that a past history of an intussusception requiring operative reduction does not necessarily imply that a recurrent episode will demand another operation. A barium enema might prove a spontaneous reduction or effect a therapeutic one.

This series of 22 cases is admittedly a small number from which to draw conclusions. Nevertheless, we certainly have had no complications from trying reduction by barium enema, and the successful patients have gone home in less than three days. In retrospect several of our operative cases, including the fatality, might have been diagnosed and treated sooner had a barium enema been done at the first suspicion of intussusception.

Our radiologists have been reluctant to prolong or persist at any attempt at reduction as long as Ravitch does. And our surgeons have withheld exploration only when the evidence of complete reduction was quite convincing. Yet with this conservative approach we have had some success and have done no harm. As we gain experience our percentage of reductions with barium enema may rise. The more we encourage early diagnosis by requesting a barium enema in all suspected cases, the better chance we have to treat these babies safely, simply, and easily.

Summary

Intussusception should be suspected in any infant with a history suggestive of the sudden onset of small bowel obstruction.

A satisfactory examination of the "acute abdomen" in an infant requires a modification of the order and manner of examination usually used in adults. The infant must be quiet and relaxed.

Ravitch's method of an attempt at reduction by barium enema under hydrostatic pressure has led to earlier diagnosis, successful treatment in 3 out of 4 cases, and a reduction in over-all morbidity.

Twenty-two cases have been analyzed. Three of 11 intussusception were reduced by barium enema without operation. Out of 15 operative cases there was one death, that attributable to a delay in diagnosis which could have been reached sooner if a barium enema had been done when first indicated.

A barium enema in all suspected cases can lead not only to an earlier diagnosis, but also to an easier and simpler cure.

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The Diagnosis and Treatment of Acute Diverticular Disease of the Colon

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Diverticula of the colon are of two types: congenital and acquired. They are separate entities. The congenital diverticulum is a true diverticulum and therefore contains all the layers of the normal colon wall. This type is rare, is usually solitary, appears most frequently in the cecum, and seldom causes symptoms unless acutely inflamed[1]. The acquired variety (fig. 1), being by-products of degeneration, are false diverticula; they are usually multiple and usually appear after 40 years of age, when the incidence increases[2]. These diverticula are found most often in the sigmoid colon and occur with diminishing frequency from the left side of the colon to the right side[3]. Predisposing factors—for example, narrowing, spasm, stasis, and increased intraluminal pressure—are most pronounced in the sigmoid[4]. This probably also accounts for the fact that the inflammation of the diverticula usually occurs only in the sigmoid and rarely in any other segment of the colon[3a, 5].

It has been said that diverticulosis coli will be found in 5 to 10 per cent of people who undergo a barium enema, and that about 15 per cent, or 8 patients in 1,000, will probably have some type of diverticulitis[3b,6]. Undoubtedly the incidence of diverticular disease and its complications will steadily increase with our lengthening life span[2, 7]. The more diverticula present in the colon, the greater the chance of developing some form of diverticulitis, but the age of onset of diverticulosis does not influence the likelihood of the onset of inflammation[8].

Classification

Diverticular disease of the colon, and of the sigmoid colon in particular, can give rise to a number of acute processes which should be considered:

1. Acute sigmoiditis[9].
   This process may progress to frank peritonitis, or obstruction, or pericolic abscess formation.
2. Perforation of a diverticulum with or without inflammation[10].
3. Hemorrhage.
   Bleeding may be acute and massive with or without diverticulitis[11].
4. Acute diverticulitis with small bowel obstruction.
5. Acute diverticulitis with fistula or sinus formation.
6. Acute diverticulitis with cancer or confused with cancer.

Obviously, the complications of diverticulosis coli are rarely so distinctly set apart clinically; rather, the involvement or changes in any given case may encompass one or all of these pathological processes. Also it should be stated that any of these clinical pictures may appear without the slightest suggestion of prior colon disease[11a].

Diagnosis

1. *Acute sigmoiditis:* The typical picture of acute diverticulities or acute sigmoiditis is that of a middle-aged, obese, constipated, sedentary individual with pain in the left lower quadrant of the abdomen[12] or left iliac fossa[3b]. A history of diverticulitis is helpful, for 45 per cent of patients who have one attack of diverticulitis will have another attack[13]. The pain and signs may be right-sided if the redundant and inflamed colon lies to that side. Also, diarrhea may be a complaint or diarrhea alternating with constipation.

Examination reveals the objective evidence of infection—for example, the elevation of temperature, pulse rate, and white blood count plus the signs of intraperitoneal inflammation: abdominal distention, diminished peristaltic activity, abdominal tender-

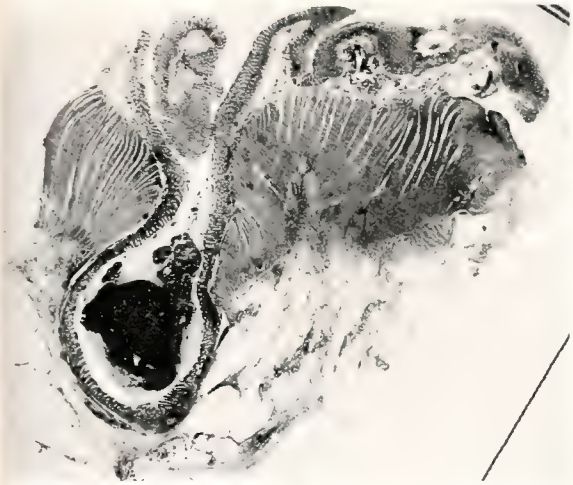


Fig. 1. Photomicrograph (x 1) of an acquired diverticulum of colon.

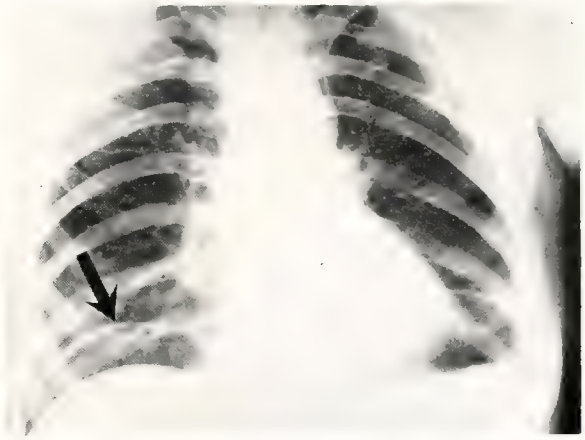


Fig. 2. Upright roentgenogram of the chest showing subphrenic air accumulation from perforation of colon diverticulum.

ness, rebound tenderness in the lower part of the abdomen, muscle-guarding over the sigmoid, and possibly a palpable sausage-shaped mass. The patient's age—that is, whether child or adult—and the origin of the pain further help to distinguish this process from appendicitis. In appendicitis the pain characteristically begins above the umbilicus and is likely to be associated with nausea and vomiting, while the pain of sigmoiditis originates below the umbilicus and is less likely to be accompanied by nausea and vomiting[5b]. In diverticulitis the pain may come and go over a period of weeks. Salpingitis, tubo-ovarian abscess, ovarian tumors, strangulated hernia, sigmoid volvulus, and mesenteric thrombosis are diagnoses which should be considered. A small, carefully administered barium enema is the best single diagnostic test[12].

2. *Perforation:* Free perforation of a diverticulum of the colon is much more common than generally realized and usually happens with little or no warning[7b]. The pain produced is severe and knife-like, and may radiate to the back, hip, thigh, anus, or genitalia[12]. Typically it is associated with nausea, vomiting, and distention, with the development of severe intraperitoneal reaction such as that seen in the rupture of any other hollow viscus. An upright chest film will often show the subphrenic air (fig. 2) and narrow the diagnosis to rupture of peptic ulcer or diverticulum. A good history of any prior difficulty, together with the point of major abdominal tenderness, should aid in making the proper diagnosis.

3. *Hemorrhage:* Bleeding in diverticulosis coli has been reported in from 4 to 28 per cent of the patients, but the number exhibiting massive hemorrhage is much smaller[11b]. Bleeding from other benign colon and anorectal lesions must be ruled out by barium enema and sigmoidoscopic examination, but it is especially important to rule out malignancy as a source of hemorrhage. Earley[11b] has compiled from his experience and others the following criteria for concluding that the bleeding arises from diverticular disease:

1. Passage by rectum of bright or dark blood;
2. Sigmoidoscopy, barium enema, and air contrast studies showing diverticular disease and excluding other potentially bleeding lesions;
3. Stomach and small intestine normal to x-ray visualization;
4. Normal coagulability of blood.

4. *Acute diverticulitis with small bowel obstruction*:

This complication has not been adequately stressed in discussions of diverticulitis[7b, 9]. The clinical picture produced is one of acute sigmoiditis together with the picture of small bowel obstruction,—namely, nausea, vomiting, cramp-like pains, abdominal distention, rushes of peristalsis, and fluid-air levels in dilated small bowel on erect x-ray films of the abdomen[9]. This problem must be distinguished from the myriad of causes of small bowel obstruction, especially those with associated intraperitoneal infection.

5. *Acute diverticulitis with fistula or sinus formation:* The formation of a vesico-colic fistula (fig. 3) may be heralded by symptoms of cystitis[2, 14], and even after the rup-



Fig. 3. Barium enema roentgenogram revealing extensive diverticulosis of sigmoid colon and air in the bladder as a result of a vesicolonic fistula.

ture into the bladder has taken place the patient's symptoms are largely directed to the genitourinary tract[4]. Cripps[15] has stated that inflammatory lesions more frequently cause sigmoidovesical fistulas than do malignant lesions. Fistulas between the colon and affixed small bowel may occur, with resultant abdominal cramps and diarrhea, or the inflammatory process may burrow to the skin to form a colocutaneous sinus.

6. *Acute diverticulitis and cancer:* Although the simultaneous occurrence of these two processes is rare[6,7a], the problem of differentiation arises often. The problem has been touched on under "Hemorrhage," for here the suspicion of malignancy is great. The distinction may also be difficult in the other classes—for example, acute sigmoiditis with obstruction, or even perforation. X-ray examination is the best method of establishing the true diagnosis, for there are some very definite differences in the appearance of malignancy as contrasted with that of the complications of diverticulosis[4]. Even so, in a high percentage of cases the diagnosis is not known until operation or even until a microscopic report is rendered [7b, 13]. For this reason the colon specimen should be opened in the operating theater to be certain that a malignancy has not been overlooked and inadequately resected.

Treatment

Treatment in any case of acute diverticular disease must be sensibly individualized, because, as stated earlier, any one case may present some aspect of any or all of our arbitrary classification.

1. *Acute sigmoiditis* without sufficient reaction to produce either paralytic ileus or progression or obstruction can be treated by a nonoperative regimen such as bed rest, antispasmodics, oral liquids, stool softeners, and intestinal antiseptics. The preferred antibiotics range from sulfasuxidine to a combination of penicillin-streptomycin. If the condition progresses under this program, therapy must be stepped up to nothing ingested by mouth, nasogastric suction, parenteral fluids, parenteral antispasmodics, and parenteral antibiotics. If the inflammatory process is checked, prophylactic resection should be seriously considered. If on the other hand the process is not checked and further complications loom, a loop colostomy should be carried out in the right transverse colon with elective sigmoid resection in four to eight weeks.

Whenever a case of acute diverticular disease progresses to the point that a colostomy is necessary, then the involved bowel should be resected before the colostomy is closed[5a, 11a, 13, 16]. At resection it is not necessary to remove all of the colon containing diverticula, but it is essential that the entire sigmoid be removed lest residual sigmoid diverticula lead to recurrent diverticulitis[17].

One other operative approach to acute sigmoiditis needs to be mentioned: the acute sigmoiditis found unexpectedly at operation. In this situation several methods of handling diseased bowel are available: an exteriorization procedure, formation of a proximal colostomy, or a delayed one-stage resection after preparation.

2. *Perforation* of a diverticulum of the colon is best treated by a proximal colostomy and drainage of the pelvis. No effort should be made to track down the exact spot of leakage with an attempt to oversew the opening in inflamed and necrotic tissues. Exteriorization of the diseased colon segment has been carried out, and even a nonoperative technique has been used, but proximal colostomy and drainage is safest. Again, once the diverticular disease has progressed to the point of rupture, resection should be the ultimate goal.

3. *Hemorrhage* from diverticular disease with or without inflammation will often subside on nonoperative measures[13]. This then allows for an elective resection on a properly prepared bowel. A nonoperative measure which may produce a dramatic cessation of bleeding is the barium enema[18]. Presumably the barium enters the offending diverticula and produces a tamponade effect. The minority of patients who do not stop bleeding on a nonoperative approach will, of course, require an emergency colon resection. These are usually older patients[11b].

4. *Acute diverticulitis with small bowel obstruction* must be recognized and not treated by proximal colostomy alone for obvious reasons[9]. Intensive nonoperative treatment may be condoned for 24 or even 48 hours if the obstruction seems to be partial and possibly due to exudation and edema. If there is no relief of the obstruction or if the obstruction recurs, it is necessary to form a colostomy and free the small bowel obstruction.

5. *Acute diverticulitis with fistula or sinus formation* should be treated by a proximal colostomy and eventual resection of the diseased colon. Simple dissection of a colo-cutaneous sinus or a colon fistula with closure invites a recurrence. Also, to close the proximal colostomy without resecting the diseased colon in cases of fistula and sinus invites recurrence[13].

6. *Acute diverticulitis and cancer* produce a much greater sense of urgency to proceed to wide resection of the involved bowel. Early proximal colostomy may diminish the inflammation more quickly than a nonoperative approach, and resection may be carried out within two to three weeks, leaving the proximal colostomy as a protection against suture line leakage.

Summary

Acute effects or complications of diverticulosis coli have been arbitrarily divided into: acute sigmoiditis, perforation, hemorrhage, acute diverticulitis with small bowel obstruction, acute diverticulitis with sinus or fistula formation, and acute diverticulitis with associated malignancy. Some suggestions have been made as to the methods of diagnosing and treating these complications. The nearest common denominator seems to be that the more frequently we resect the colon in symptomatic, progressive diverticular disease, the less often these complications will have to be treated.

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Diagnosis and Treatment of Acute Cholecystitis

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Because of the rapidly increasing number of older people in the population, the incidence of complications arising from chronic biliary tract disease is on the increase. Among these complications is acute cholecystitis. For example, during a 26-year period (1932-1958) at the New York Hospital, 5,037 operations were performed for nonmalignant biliary tract disease, 1,028 of which were for acute cholecystitis[1]. It has been estimated that approximately 10 per cent of the entire population have gallstones, and the incidence is about four times as frequent in women as in men[2]. Approximately 10 per cent of these patients may be expected to develop acute cholecystitis.

The etiology of gallstone formation is still unknown in spite of intensive research. Neither is the mechanism of the development of acute cholecystitis completely understood. A common clinical finding in acute cholecystitis, however, is the presence of an impacted stone producing obstruction of the cystic duct. Although acute cholecystitis may occur in the absence of cholelithiasis, this is the exception and not the rule. Most students of the disease feel that with obstruction of the cystic duct, the concentration of bile in the obstructed gallbladder is increased, giving rise, initially, to a chemical inflammatory reaction, resulting in edema of the wall of the organ. This, in turn, leads to impairment of the circulation and eventual invasion of the damaged tissue by bacteria. Although bacteria can conceivably enter the organ from the blood stream by direct invasion from adjacent organs or originate from the bile, evidence suggests that the bacterial invasion occurs most often via the lymphatic vessels[2]. Bacteria can be cultured from approximately 50 per cent of acutely inflamed gallbladders, and the most common organisms recovered are *Escherichia coli* and streptococci[3].

Diagnosis

Cholecystography provides the single most helpful procedure in establishing the presence or absence of chronic gallbladder disease. The most helpful diagnostic procedure in acute cholecystitis, however, is the physical examination of the patient. The symptoms are strikingly uniform in a majority of cases.

The attack usually begins with the development of moderately severe epigastric or right upper quadrant pain, often radiating to the back, scapula area, or right shoulder. The pain is usually quite severe, requiring narcotics for relief, and is usually associated with nausea and vomiting. Chills and fever, or fever alone, develop during the attack.

The physical signs consist of tenderness, muscle spasm, and rebound tenderness in the right upper quadrant; there is often a palpable mass in this area, representing the distended gallbladder. A mild jaundice is often present. If perforation of the gallbladder has occurred, a palpable mass representing a walled-off abscess, or generalized peritoneal signs representing a bile peritonitis, will be present.

Laboratory studies in acute cholecystitis reveal a leukocytosis and, in some cases, mild elevation of serum bilirubin. Serum amylase may be elevated in cases associated with pancreatitis, which is usually of the edematous variety. An intravenous cholangiogram may result in visualization of the common duct but non-filling of the gallbladder[4].

Acute cholecystitis must be differentiated from other acute abdominal inflammatory conditions, such as perforated duodenal ulcer, acute cholecystitis, acute pancreatitis, acute diverticulitis, hepatitis, and abscess of the liver. Renal disease and coronary thrombosis also should be included in the differential diagnosis.

Treatment

The patient with acute cholecystitis may be treated with or without operation during the acute attack. Although certain physicians may, by choice, treat all their cases by one or the other of the two methods, many now hold that the method chosen be fitted to the individual patient, based upon consideration of a variety of factors bearing upon the mortality and morbidity of the disease. Some of the factors are:

1. The duration of symptoms when the patient is first seen

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2. The accuracy of diagnosis
3. Age of the patient
4. Presence of associated disease
5. Severity of the disease when patient is first seen.

Prevailing opinion holds that operation can be carried out in a majority of patients during the early stages (48 to 72 hours) of acute cholecystitis with a low mortality and morbidity, and with a shorter hospital stay. Large groups of patients treated by both surgical and nonsurgical methods with no striking difference in mortality have been reported. Thus Bartlett[5] reported on 592 patients treated surgically and 124 patients treated nonsurgically at the Massachusetts General Hospital with a mortality rate of 3 per cent in the surgical cases and 4 per cent in the nonsurgical cases. Becker[6] reported on 679 patients treated surgically and 381 patients treated nonsurgically at the Charity Hospital in New Orleans. The mortality rate in the surgical group was 6.6 per cent, and in the nonsurgical 5.5 per cent.

The types of operative procedures usually employed are cholecystectomy, cholecystectomy and choledochostomy, and cholecystostomy. The incidence of exploration of the common duct during operation as reported by several authors[5,7] varies between 10 and 40 per cent. It is suggested that the following conditions constitute indications for exploration of the common bile duct during operation for acute cholecystitis:

1. Palpable stone in duct
2. Jaundice with bilirubin above 5 mg. per 100 ml.
3. Associated pancreatitis.

It should be pointed out that if the inflammatory reaction around the common duct obscures anatomic identification of structures in the area, exploration of the common duct, even when indications exist, may be deferred and performed as a secondary procedure later.

Cholecystostomy is used in the acutely ill or poor risk patient who fails to respond to nonoperative treatment. The procedure can be carried out under local anesthesia with only slight risk and may be life-saving in this seriously ill group.

The complication to be avoided, if at all possible, is perforation of the gallbladder prior to surgical intervention. At one time this complication was considered rare; however, the several reported series suggests that it develops in 10 to 25 per cent of patients with acute cholecystitis[8]. Three types of perforations occur: (1) perforation into the free peritoneal cavity, the most serious; (2) perforation with walled-off abscess, the least serious; and (3) perforation into an adjacent viscus, often the colon. The management of perforation with generalized peritonitis is cholecystectomy with drainage of the peritoneal cavity. The treatment of perforation with localized abscess is initially a nonoperative program including stomach suction, antibiotics, and intravenous fluids. Interval cholecystectomy should be carried out later. Treatment of perforation into an adjacent viscus consists of cholecystectomy with repair of the perforation into the involved viscus.

The principles of nonsurgical treatment are bed rest, stomach suction, antibiotics, and intravenous fluids and electrolytes. This treatment should be continued until the patient is pain-free and the temperature and leukocyte count have returned to normal.

An interesting approach with which the author has had no experience is the use of procaine block of perirenal or splanchnic nerve. A Russian surgeon, Ossipov[9], has recently reported on this technique. It is my opinion that, as in acute pancreatitis, regional procaine injection in acute cholecystitis favorably influences the acute inflammatory process. Patients are initially given a paranephric procaine block, some of which respond (no figures given); those who do not respond are operated on during the first 24 hours, under local anesthesia. Under this method there were 9 deaths in 285 operations, a mortality rate of 3.1 per cent.

Experience at Duke Hospital

The charts of 100 consecutive cases of acute cholecystitis treated at Duke Hospital from 1953 through 1959 were recently reviewed. Fifty-one patients were operated on during the acute attack, and 49 patients were treated nonoperatively. Thirty-one were males and 69 were females. Forty-two patients were under 50 and 58 patients were over 50 years of age. Twenty-one patients were over 70 years of age and seven patients were over 80. Operation was carried out in the following circumstances:

1. In patients seen early in the disease (48 hours) who were good or reasonable surgical risks
2. In patients where diagnosis was in doubt

3. In patients who did not respond or grew worse during medical treatment
4. In patients who exhibited signs of impending or actual perforation of the gallbladder.

The results of treatment and type of operative procedure used in the 100 cases of acute cholecystitis are shown in table 1. One of the deaths in the surgically treated group resulted from cardiac arrest which developed during operation, and autopsy showed, in addition to acute cholecystitis, marked coronary atherosclerosis. The other death in the surgical group occurred in a patient who had acute cholecystitis five days following inferior vena caval ligation for multiple pulmonary embolism. The patient was operated on 24 hours following the onset of abdominal symptoms and was found to have a perforated gallbladder, which was removed. The patient died two days later, presumably from peritonitis; no autopsy was obtained.

The one death in the nonoperatively treated group occurred in a patient who was admitted to the hospital with signs of generalized peritonitis and who died 24 hours later. The cause of the peritonitis was not established prior to death. Autopsy revealed a generalized bile peritonitis from perforation of an acutely inflamed gallbladder.

Certain associated diseases encountered in the 100 patients treated for acute cholecystitis are of interest. Five patients had acute pancreatitis. All these patients had a serum amylase level above 500 Somgyi units when first seen before operation. Operation was deferred in all these patients during the acute attack. Three patients were found to have carcinoma of the pancreas in conjunction with acute cholecystitis. In one case acute cholecystitis developed after an operation for an unassociated condition.

Summary and Conclusions

A review of the diagnostic features of acute cholecystitis is presented. Diagnosis can be established in a majority of patients early in the acute attack. The most helpful diagnostic procedure is accurate observation of physical signs associated with the disease. Intravenous cholangiography performed during an acute attack may be helpful.

Table 1
Mortality in Surgical and Nonsurgical Treatment of Acute Cholecystitis

Treatment	No. Cases	No. Deaths	Mortality
Nonoperative	49	1	2%
Operative	51	2	4%
Cholecystectomy	40	1	
Cholecystectomy	6	0	
Cholecystectomy and Choledochostomy	6	0	
Cholecystostomy	5	1	

Results of treatment in acute cholecystitis, as reported in current medical literature, suggest that patients can be treated both operatively and nonoperatively with a similar mortality.

A review of 100 consecutive patients with acute cholecystitis treated at Duke Hospital from 1953 through 1959 shows that approximately one half of the patients were operated upon during the acute attack, and the other half were treated nonoperatively. Mortality rates were similar in the two groups. The indications for operation and management of complications are discussed. It is concluded that treatment of patients should be individualized, and that the form of treatment chosen should be that which is best suited to the specific situation in each individual case.

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Acute Surgical Conditions Associated with Pelvic Endometriosis

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The problem of endometriosis deserves deliberate consideration in a symposium dealing with acute surgical conditions of the abdomen. The "acute abdomen" generally is well understood and its importance recognized. Though the qualified surgeon is capable of meeting emergencies as they arise, anticipating the correct diagnosis allows for better preoperative care, better definitive measures, and greater assurance that the patient will be maintained as a normal anatomic, biologic, and psychologic woman.

Diagnostic Criteria

The compelling reason for placing a case of endometriosis in the category of surgically acute conditions would probably be one or a combination of several symptoms and findings: Intra-abdominal bleeding, intestinal obstruction, lower abdominal infection, bleeding from the urinary tract, and rectal bleeding are the most common in the acutely ill patient. The patient would likely be in the 20- to 40-year age group; she would give a history of increasing dysmenorrhea or acquired dysmenorrhea; the menstrual cycle probably would have been altered; if married, she might give a history of sterility; previous uterine currettement or pelvic operations are not uncommon. The patient must have or have had a uterus and functioning ovarian tissue in order to have endometriosis; however, intestinal obstruction can occur after castration or hysterectomy in patients who have had proven endometriosis.

The acute symptom or symptoms are easier to explain than those of chronic or progressing pelvic endometriosis. A transplant to the ovary can rupture, giving signs and symptoms similar to an ectopic pregnancy or bleeding from a ruptured graffian follicle; or it can become twisted, thus actually becoming a twisted ovarian cyst with the related complications: old blood and cellular material can escape from an area of endometrial transplants and give all the evidence of acute appendicitis or salpingitis, or such areas can themselves become infected. Large and small intestines can become adherent to endometrial nodules with resulting intestinal obstruction, or the process can involve the bowel wall, usually rectosigmoid, and gradually produce obstruction. In two instances we have been confronted with hematuria and ureteral pain with symptoms similar to renal calculus and have found endometrioma of the broad ligament and pelvic brim with hemorrhage.

Abdominal palpation or auscultation yields little that is distinctive. Pelvic examination, however, may disclose something that could suggest pelvic endometriosis. Tenderness and "beading" of the uterosacral ligaments is a common finding, and there is usually more fixation of the uterus and adnexae than one finds certainly in appendicitis or in a patient with initial salpingo-oophoritis. Although bilaterality is common in the disease, usually one ovary and tube is more adherent than the other. The rectovaginal septum may be obliterated, is unusually tender, or perhaps has findings similar to ruptured ectopic pregnancy. Rarely, a suggestive spot is encountered on the cervix or vaginal mucosa that would add to the suspicion of endometriosis, but this sign is uncommon.

Treatment

The management of these acute complications of endometriosis is surgical, but conservative treatment is usually possible. The conservation of ovarian tissue and an attempt to preserve and promote fertility is laudable and often rewarding. Endometriosis is one of the few conditions in which "piecemeal" surgery in the pelvis is justified. An infected endometrioma is excised, usually without drainage; a bleeding area is usually removed; when intestines are adherent or kinked, they are freed and the implants excised or fulgurated; when pelvic viscera are distorted, they are replaced and raw areas protected. If the patient's condition is satisfactory and if she has had severe dysmenorrhea, pre-sacral neurectomy could be included and will often give gratifying relief. Prolapsed and adherent ovaries and tubes should be freed and suspended

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with minimal trauma. A uterus that is pathologically fixed in retroversion might offer one of the few remaining justifications for the procedure of uterine suspension.

Endometrioma of the bladder and rectum, usually the anterior wall, sometimes are so extensive that partial resection of the viscus is necessary for relief; and if the process is quite extensive, castration might be necessary. If in doubt, one is usually safe in being conservative, since castration can later be accomplished by x-ray.

Culdoscopy carries a hazard in extensive pelvic endometriosis and is of value chiefly in the differential diagnosis of obscure pelvic complaints with little or no palpatory findings.

Conclusion

In a discussion dealing primarily with the acute complications possible in pelvic endometriosis, it is not necessary to outline the ideas regarding histogenesis nor to relate the most recent studies of the response to endocrine therapy. The background and current management of this condition make fascinating study. Such a study is definitely warranted in the effort to reduce the increasing incidence of this crippling lesion.

Medical and Hospital Costs of the Aged — A Current Appraisal

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The medical profession is now facing a problem which it has to a large extent created. The United States has a population of more than 175 million persons, of whom 16 million are aged 65 years and over. The persons in this age group are increasing at about twice the rate of the over-all population.

Wherever one turns in the literature on aging there echoes the theme crisply stated by Piersol and Bortz in the late 1930's: "The society which fosters research to save human life cannot escape responsibility for the life thus extended. It is for science not only to add the years to life but more important to add life to the years." But will the added years of life be burdened by disease, illness, disability, and high medical costs?

Persons aged 65 years and over are becoming increasingly aware of the value of good medical care. Certainly they have reason to be thankful for this type of medical care. In the past, pain, disability, and serious illness involved relatively little expense, because there was little that could be done for a sick person. Now pain and disability can often be avoided and death significantly postponed, but at the cost of more visits to the physician, more admissions to hospitals, more use of drugs and other treatments. All these medical expenses must be met either by the elderly patient, his family, the physician, the hospital, or society. In the light of decreasing mortality among the middle-aged and the aged, the recent increases in the cost of medical care do not seem excessive. In fact, some authorities believe that we do not yet spend enough for health care.

Rising Expenditures for Medical Care

As part of their rising standard of living today, the American people are spending more money on medical care than ever before. Part of the increase reflects population growth and rising prices; even on a per capita basis and with prices held constant, medical spending has increased. For this large outlay, the American consumer today receives a greater quantity and variety of improved medical services.

Studies by the Health Information Foundation indicate that in 1929 Americans spent $3 billion for medical care. Over the next four years, as economic activity contracted, annual expenditures dropped by about one-third, reaching just below $2 billion in 1933. Expenditures for medical care have increased each year since then. In 1959 the public spent an estimated $22 billion, about 7 times as high as in 1929.

Gross expenditures for medical care since 1929 reflect a rise in spending by consumers not only for the total, but also for each major component of the medical care index in both

gross and per capita terms. Payments to the physician, largest of the components, in 1929 through 1954 rose from $959 million in 1929 to over $2.5 million in 1957. Although impressive, this increase has been overshadowed by other components. The physician's share of the medical care dollar dropped from 32.6 to 24.5 cents. In contrast, spending for hospitals rose from $403 million in 1929 to $3,884 million in 1957. In like manner, expenditures for hospital and medical care insurance rose from $108 million in 1929 to $1,064 million in 1957.

Part of the increase in spending for medical care followed the swelling income of the American people. Disposable personal income — that is, income after taxes — rose from $683 per capita in 1929 to $1,812 per capita in 1957. Medical expenditures constituted 3.5 per cent of disposable personal income in 1929; it then rose to 4.4 per cent in 1932. By 1957 spending for medical care amounted to 4.9 per cent of the disposable personal income. The American consumer, including the aged person, has been putting greater emphasis on medical care. Medical care is now becoming an important part of the American standard of living.

Economists must consider the over-all picture in analyzing a situation. Analysis, however, does not prevent the economist from understanding that while he may speak of billions of dollars or millions of people, it is still the individual aged person and his family that is most important. All analysis will concern large groups. The prime interest of the research still is the individual.

A large segment of the older population does not receive active hospital or nursing care. According to available information, about 1.8 per cent of all older people are in the hospital a single day and occupy less than 20 per cent of the total number of patient beds in short-term general hospitals. Yet, the recent report of the Commonwealth of Massachusetts stated: "Persons past 65 years of age have the highest rates of chronic disease and disability of any age group. Almost one in every two aged persons has a chronic disease or impairment. While they make up just 8% of the population, on any given day, they occupy 18% of our general hospital beds, 22% of our long-term hospital beds and 80 to 90% of the beds in nursing homes. In addition, it has been estimated that 16% of the aged were suffering from a form of disability lasting more than six months as opposed to only 3% of the working age adults. Not only is their average length of stay longer in the hospital, nursing homes and other institutions, but aged use the services of a physician more often than do any age groups."

The average cost of medical care for those 65 years and over is higher than for the general population. The Health Information Foundation found in the early 1950's that persons 65 years of age and over averaged $102 per person in expenditures for private personal health services, or 57 per cent more than the $65 per person cost in general population.

The rise in the aged population has brought about many conferences, institutes, meetings, and statements of experts. It is the purpose here to present a background for viewing the expenditures for medical and hospital care of the aged based on current research.

Medical Costs

Let us be practical about this matter of medical costs. For some, *any* medical expenditure will be a problem; for others, virtually no medical expenditure will be a problem. It becomes important to remember that we are discussing only the purchase of the best type of medical care. This is the type of medical care that will answer the organic or psychological problem facing the aged. Apparently no sum is too great for most people to spend in order to preserve life. Medical care is not confined to stays in the hospital or visits to the physician. For the aged medical care consists also of preventive and rehabilitative processes needed to maintain the aged person in active life in the community. Although preventive medicine is of growing importance, the emphasis here will be on the hospital and physician charges. This is because of lack of research on the actual payments for the rehabilitative elements of medical care. These elements, however, are primordial in maintaining the aged person in the community and lowering future medical costs.

The present health conditions of the nation are improving. Besides medical advances, changes in housing, nutrition, education, and employment for the American people in the last half century cannot be overlooked. Although preventive medicine, rehabilitation, and recreation are important, they will not be emphasized—in order that

we can concentrate on more controversial research.

"Disease" and "Disability"

We have the unhappy habit of using the words "illness," "disease," and "disability" as if they were interchangable. The majority of us have some type of disease. Some have bad eyes and wear glasses; others have sinus conditions or asthma; others have varying degrees of arthritis. All these are diseases. Each may be important to the individual, but the key point is the extent of disability resulting. Too quickly it is pointed out that the morbidity of the aged is four times that of persons aged one to 14. The key question still is: Does the disease cause the individual disability and higher medical costs? If the individual has adjusted himself to the disability, as have those of us who wear glasses, does the condition really matter? A chronic disease does not necessarily constitute a chronic illness problem.

Large Bills for Medical Care

Hardly anyone likes to pay a doctor's or hospital bill; the majority of us never do pay a high bill. In a recent survey made by the magazine *Medical Economics* to determine the highest bills charged by physicians, the median highest charge for 171 specialists was $650. Most bills for medical care in any one year are less than $300. The majority of the people do have more than $300. A recent survey by the New Jersey Blue Cross shows what this would mean. The New Jersey Blue Cross has a 120-day basic hospital care plan. Their study indicated that out of every 100 claims filed under this plan, 90 were paid in full by the plan. Six were paid partially by the plan and only four went into the area of extended, high-cost medical care. Therefore, probably less than 10 per cent of those receiving hospital care have high medical bills. The National Health Service has shown that approximately 90 per cent of the aged who enter a short-term general hospital are discharged in less than 30 days. These persons, however, fear that they will be one of those 10 who remain more than 30 days. They fear that they will be among those 4 whose bills will extend beyond the 120 days of the basic Blue Cross policy. This is a situation which we must come to grips with.

Does anyone really want to cut the high expenditures for medical care? Would the aged person prefer to do without medical and hospital care rather than pay for these services? Would the physician prefer to give his patient less than the best possible medical management? Would the hospitals rather not have the radioisotope department take care of patients? I think the answer is that everyone wants the best possible type of medical care and is willing to pay for it, if he can.

Medical expenditures have been rising since 1945. We do not have the statistics for the entire aged population, but we do have them for the population as a whole. We may have paid too much attention to the relative increase in medical costs and too little to what medical care would have been, had these expenditures not been made. At the present time the entire population pays about $2,500,000,000 for physician services as contrasted with about $1,500,000,000 in 1949. When it is considered that in the same period of time the national income rose from $400 billion to approximately $440 billion this does not seem a very great rise. The same should be said for hospital costs. We have doubled hospital expenditures since 1949—from roughly $2 billion to $4 billion. This may not be too great a price to pay for an increase of over 150,000 new hospital beds. A hospital bed must be paid for whether it is being used or not. The hospital must be ready to take care of the patient in emergencies, and it costs roughly 70 per cent of the cost of an occupied bed to maintain an unoccupied bed.

Paying Medical Care Costs

These figures are averages, but are the aged able to pay for these services? One report stated that 60 per cent of the aged have an annual income of less than $1,000. The aged are not isolated. The majority are living either with their spouses or with a family. For example, there is the aged widow who would normally move in with the daughter's family, if at all possible. This widow has a very small income, but she probably pays no rent and receives some type of income from the daughter's husband whether he likes it or not. In a medical crisis the family will, according to recent research, come together to aid the mother. The matter of income is not the entire story of the aged's resources to pay for acute illness.

By the time the aged person has left the labor market or entered widowhood, there has been an accumulation of assets and in-

come. The direct income from labor market activity may not be too great but the income based on assets may be of great value in a "crisis." As an example, in 1959, annuities based on past income paid to those over age 65 came to nearly $450 million a year. Whether the aged person will consider this income or annuities is a question which research can throw little light on.

According to available research, the majority of aged persons pay their entire charge to the hospital and the physician.

Voluntary Health Insurance

We have been discussing this entire question of medical expenditures as if voluntary health insurance did not exist. Of course it exists and is utilized by an increasing number of aged persons. In 1951 it was estimated that about 1,800,000 persons aged 65 and over, or 15 per cent, were covered by voluntary health insurance. By 1958, 43 per cent or 6,600,000 aged persons were being covered by voluntary health insurance. Last year the expansion of Blue Cross-Blue Shield and other health insurance plans have probably increased this number much more.

In the past, we have stated that voluntary health insurance among the aged increases at a rate of approximately 3 per cent a year. If we use this conservative figure, at least 47 per cent of the total aged have voluntary health insurance. Yet there are many aged persons who for religious and other reasons do not want voluntary health insurance or who can receive the same benefits without paying for it. Research provides some idea of the categories involved. We do not have, however, exact figures as to the number of veterans who look upon the local Veterans Administration hospital as "their voluntary health insurance" benefit. The Health Insurance Association of America estimated that in 1957 between 3 to 5 million persons could be included in the group that does want or need voluntary health insurance. If you take the mean of 4 million persons, an increasing coverage has been already provided for the aged by voluntary health insurance.

Voluntary health insurance seems to be doing a good job for the majority of the acutely ill aged people who have it. A recent survey published by the U. S. Department of Health, Education and Welfare stated that only 14 per cent of the couples and 9 per cent of the individuals under Old Age Survivors Insurance received any benefits from their voluntary health insurance to help pay for medical care. This, of course, is true. In order to determine what was being spent for all medical care, the OASI attempted to survey *all* expenditures for medical care such as osteopathic services physicians' services, faith-healing, nursing home care, dentistry, hospital care, ethical and proprietary drugs. The result was exactly what everybody expected. The majority of aged people do not go into the hospital and do not receive any aid from voluntary health insurance. It is one thing to say that expenditures for proprietary drugs is a medical care cost. I do not think that anyone will argue with the fact that for many this is true. Should voluntary health insurance pay for the purchases of aspirin, vitamins and antibiotics? The decision may well be that they should. If so, the cost of voluntary health insurance may go much higher than it has in the past. According to the statistics of the OASI survey, approximately 20 per cent of the OASI couples used the hospital within a year. This would mean that while 43 per cent of the aged had voluntary health insurance, it may be that close to 65 per cent of all of those who were hospitalized received aid from voluntary health insurance.

The quality of coverage provided by voluntary health insurance is quite important. There has been no study at the present time that can tell us the amount of the total hospital and physician charge to the aged paid for by voluntary health insurance. Part of the research problem has been that for certain diseases voluntary health insurance does not provide aid for needs such as cosmetic surgery or psychotherapy. Yet research in Michigan Blue Cross on the aged seems to show that approximately 90 per cent of all hospital bills of the aged were paid for by voluntary health insurance. Whether it should be 100 per cent is a question which I think should take additional study.

Statements to the effect that voluntary health insurance cannot provide coverage for the aged come from persons who have not tried to provide it. As an example, in 1938 the Federal Government called a conference on voluntary health insurance. The report found that because of the low income of the people of the United States, the voluntary health insurance movement must fail. "The conclusion is inescapable that considerable proportions of the nation's families are too

poor to afford the cost of adequate medical care from their own resources. In the face of needs which are vital and urgent for, at least, 100 million persons in the United States, the Technical Committee on Medical Care cannot find the answer to the nation's problem in voluntary insurance methods."

"Fortunately, the voluntary health insurance movement went ahead and provided coverage. They did not stop to listen to the experts who told them it could not be done. By now we have coverage for approximately 71 per cent of the entire population. It is estimated that possibly by 1975, a large majority of the aged who need and want voluntary health insurance will have it. By 1958, for example, the number of Blue Shield plans that will enroll persons over age 65 had risen from 8 to more than 30 plans, with many more planning to provide such coverage within this coming year.

Catastrophic Illness

The problem, however, facing many of the aged is not only one of actual medical expenditure. It is the fear of a high medical expenditure in the future. Almost everyone knows someone who has had to pay $1,000 or $2,000 for medical care. In essence, we are discussing the chronically ill of any age. It is expensive to be ill. Chronic illness drains the resources of the individual and the family in time. The 85 year old person with chronic arthritis and the Mongoloid child are both chronically ill. Their needs must be provided for. Research seems to suggest a way by which this can be done. It has been only 10 years since the concept of "major medical" or prolonged illness contract appeared on the American scene. Ten years ago anyone who said that there could be a major medical plan for over $5,000 was laughed at. Today they are selling major medical plans for $10 to $20,000. In Massachusetts, the Massachusetts Blue Cross-Blue Shield has an experimental program to find out about what it would take to sell a $5,000 "Master Medical" or "Prolonged Illness" program to the aged. One firm is already providing $15,000 worth of major medical benefits to their retirees. With the inflationary trend, $5 to $15,000 may be too small in the future. Perhaps it may be necessary to go to $40 or $50,000 in order to make sure that the chronically ill costs of that small group of the aged are adequately taken care of. If a reasonable deductible clause and a reasonable coinsurance feature are included, it may be possible to sell these policies. At the same time, the basic contract coverage must be extended.

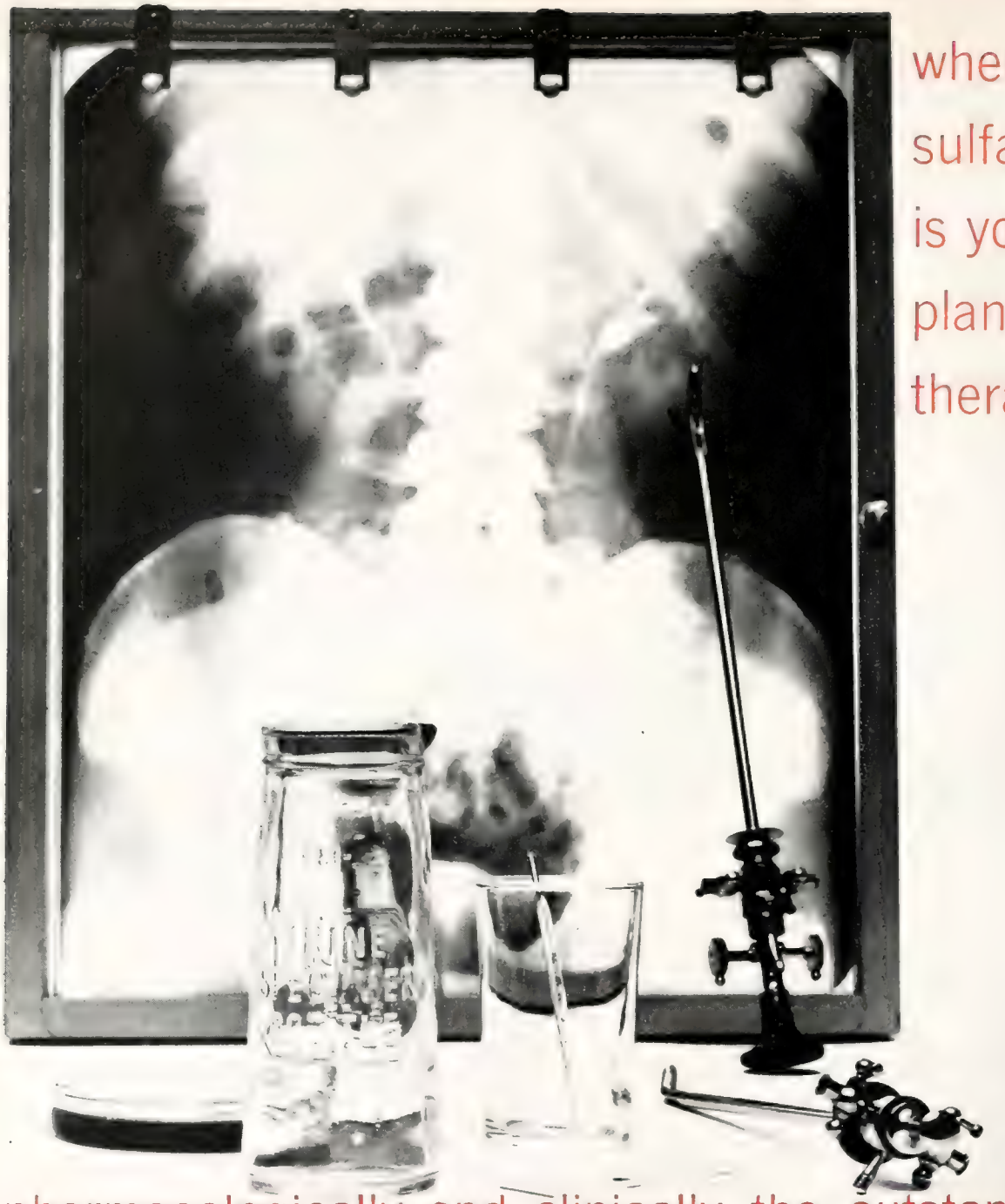
Summary

In facing the problem of those in the older age groups who are in need of medical, economic or social aid, one can enumerate aspects of that problem, devise solutions, and eventually try to coordinate the different solutions into a program. One can also take one of the numerous solutions in the literature and accept it as the answer. I prefer the former pragmatic approach. There are certain problems of medical care expenditures among the aged. They must be met. There is not one single problem, but a whole series. Perhaps the solutions presented by an English doctor is one for us to contemplate. "A completely unified and regimented service on the behalf of the aged would be akin to the nature of the problem but would defeat any attempt to distribute responsibility for them among all classes of the community and might lessen public concern. Certainly, it may be unwise to allow the idea to gain substance that care of the aged will be taken over completely by the diffuse father figure of the state." We are all involved, for health like happiness is an objective always to be sought even if it can never be fully obtained.

In the recent book, *The Image of America*, R. L. Bruckberger, a French Dominican Father, pointed out that our country has demonstrated a genius for solving social problems that have baffled mankind for generations. There is very little marriage to dogma and ideology, but a great national confidence that we can find solutions to our difficulties. This has resulted in the willingness to experiment, to explore, to be flexible in our approach to social and economic problems and developments. The question of paying for medical care by the aged will be met in the same way.

(Note: An extensive bibliography has been prepared for this article. It may be obtained from the editor).


A vine, someone said, is like the human mind - always reaching out for new things to grasp.
PROGRESS...
One way or another people will seek out new ways to cope with old problems. Yet progress must be wisely guided. One doctor says: "The desire of the public to have prepayment medical protection is so urgent that it will buy this protection from whatever plan seems most enticing. Whether you like it or not, prepayment medical care is here to stay. Let us support the system which is voluntary and over which we have adequate control." BLUE SHIELD
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5,000	5,000 to 10,000	50.00 Weekly	$ 78.00	$ 39.50	$104.00	$ 52.50
5,000	7,500 to 15,000	75.00 Weekly	114.00	57.50	152.00	76.50
5,000	10,000 to 20,000	100.00 Weekly	150.00	75.50	200.00	100.50
5,000	12,500 to 25,000	125.00 Weekly	186.00	93.50	248.00	124.50
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Medical Problems Facing Congress

Sam J. Ervin, Jr.*
Washington, D. C.

It is a great privilege to be here today and to talk to you who practice the healing art. Any member of a legislative body is necessarily concerned with public health, because the government has been concerned with this problem for generations.

We have many problems in Washington, but I'm inclined to think that some of the solutions offered are worse than the problems. We have a very loquacious member of the Senate in the person of Hubert Humphrey. Some newspaper man writing about him a few days ago said he was the only man in public life who had had more solutions than there were problems. Incidentally, I think maybe the medical profession has a few unsolved problems of its own.

The Government's Role in the Field of Health

I want to talk this morning, as briefly as any member of the United States Senate can talk, about the place of the federal government in the field of health. I think the federal government has a real place in this field, and one that has probably become more important as a result of existing conditions.

The most astounding advances have been made in medicine during the past quarter century than in any other field of life. In the old days a doctor could carry the tools of his profession in a small bag, but with the advancement of medical science, the cost of treatment, when considered on a nationwide basis, has become enormous.

In the days before the astronomical rise of the national budget, when Congress thought that perhaps the taxpayers knew better how to spend their income than Congress did, and when income taxes were either nonexistent or low, many people were able to make great contributions to causes and institutions such as hospitals and medical schools. But as time passed and the national budget rose from $3 billion in 1930 to $79.8 billion in 1960, the federal government has been confiscating large parts of the individual personal income of the American people by way of the federal income tax. As a result, it has become virtually impossible for people to amass large fortunes as they did in times gone by, and consequently individual gifts to medical school and hospitals have greatly diminished. This factor has added to the difficulties confronting the nation at this time.

From the time that the Marine Hospital was established in 1797 down to this day, the federal government has had a real place in the field of public health. Today, as you know, it makes grants to state and local health authorities for general purposes and sometimes for specific ones.

Then the federal government I think, has a right, under the Hill-Burton Act, to assist the states and communities in the erection of hospitals. This program has been extended of late to include nursing homes.

The federal government, I believe, has a real place in the field of medical research and is doing a fine job in the National Institutes of Health in Bethesda, Maryland.

As a result of the inability of the American people to make large gifts to medical schools, the federal government can help (1) through cooperative arrangements with the faculties of medical schools in the research field, and (2) by providing fellowships and traineeships to medical students. Also, I think the government has done a fine thing in establishing the great institution which we now have in Cincinnati for study in that very essential field of public health.

Objections to Pending Bills

I know you are interested in some of the medical problems now confronting Congress, and particularly in the Forand bill. A number of other proposals are pending.

If I controlled the situation, I would postpone any consideration of these bills until next January, simply because most of them, when analyzed, appear to be designed to promote or protect the political health of some members of Congress, rather than

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Reporter's Transcript of an address delivered before the First General Session of the Medical Society of the State of North Carolina, Raleigh, May 9, 1060.

*Senior Senator from North Carolina.

the health of the people in whose behalf they are supposed to be offered.

Frankly, I believe that a serious problem exists in this field—one which merits the consideration of the medical profession, the Congress, the states, and local communities. But I do not think that any of the proposals made thus far are the correct solutions.

With no wish to be partisan, I refer first to the Administration Program—a hodgepodge proposal, thrown together hurriedly merely as what you would call a counter-irritant to the other political bills on this subject.

Contrary to Social Security concept

These proposals have several fundamental objections. In the first place, being geared to Social Security rules, they involve a serious question as to whether or not we should depart from the original concept which underlies the system.

This idea was that, while the system was compulsory in nature, when a person became eligible for Social Security benefits he was to receive them as a free man; that they belonged to him, and that he was to have the privilege of doing what he wished with them.

A bill which undertakes to place the cost of medical and hospital care under the Social Security system is an absolute departure from that concept, because it provides that the contracts are to be made by the Secretary of the Department of Health, Education and Welfare, except when he might delegate that authority to some one of the insurance companies. Furthermore, he not only makes these contracts but handles the monies for all recipients of Social Security benefits. So one serious problem confronting the American people and the Congress is whether or not they are going to depart entirely from the original Social Security concept that a man should be free to handle his own funds.

These bills say, of course, that a man can select his own surgeon and his own hospital. This is not exactly true, because he can select only a surgeon or a hospital having a contract with the Secretary of Health, Education and Welfare, or with the delegated agent of the Secretary. Furthermore, he is denied the right to make any contract with respect to his treatment, because he cannot contract to pay the hospital or the surgeon a cent more money than that which is to be paid by the government under the contract with the Secretary or his agents.

Fail to help the neediest

One objection, as I see it, to these bills in their present form is that, except the Administration bill and the McNamara bill, none of them provides any assistance whatever for the people who need it the most. As a general rule most of the people on Social Security can meet their own medical expenses.

At the risk of being charged with the same offense as was a storekeeper that I will now tell you about, I want to present a few statistics. A certain mountaineer who had been buying groceries on credit at the neighborhood store received a bill which was considerably more than he thought it ought to be. When he complained, the grocer got out the account book, laid it on the counter, and said: "Here are the figures; look at them yourself. Figures don't lie."

The mountaineer said, "No, figures don't lie, but liars sure do figure."

At the risk of falling into that category, I wish to quote some figures that I think are germane to this matter. There are approximately 16 million people in the United States of the age of 64 and up, who are now called aged people in legislative parlance in Washington. Of these approximately 2,250,000 receive Old Age Assistance. They are, in a sense, financially destitute. They are the people who normally need medical, surgical or hospital treatment the worst, but are the least able to provide it for themselves.

Such measures as the Forand bill make no provision whatever for this group of people. Benefits are confined to those who are receiving Social Security, and the average person on Social Security, even though he be 65 or older, can pay his own medical and hospital bills. The records show that these bills average approximately $125 in the course of a year, and most Social Security beneficiaries can handle that.

Now, the people who receive Old Age Assistance do so because they are destitute. If there is any group of people that are in need, not only of the necessities of life but also medical care, it is they. It is true they receive some medical benefits through the

Welfare Service, and I think that those benefits should be expanded.

Another group of persons that I think the medical profession, the Congress, and the state legislatures and state health authorities must consider are elderly people who have just enough property to be ineligible for Old Age Assistance but who would be destroyed financially by chronic, protracted illnesses.

The average person under the Social Security system does not come within this group, which constitutes only a minority of our elderly citizens. But there must be some system whereby discretionary power would be given the public health authorities to assist these persons, and there should be provision through the Welfare Service to help those in a more expanded way on Old Age Assistance.

Fundamentally, the trouble with the current proposals is that they do not help the people who are most in need of aid. Politicians are funny when they start doing something: they want to be like the rain which falls on the just and the unjust alike. In this case, they want the benefits to fall on the needy and those that are not needy. They treat them exactly the same. That is precisely what these bills do.

For that reason, since they exclude people on Old Age Assistance and make no provision for those with limited means who suffer for long periods of time, are chronically ill, and ought to have some discretionary relief rather than relief which applies to all alike, I am opposed to such legislation.

Limited benefits

The bills are inadequate for another reason. They are limited. Under these bills—the Forand bill, for example—a man can get two months of hospital treatment. That wouldn't help anyone who was sick for months and months or a person who is chronically ill for several years. It is true he can go to the hospital for two months, but then he would have to get along as best he could, and it would be 10 more months before he would be eligible to go back to the hospital. Furthermore, provision is made for surgical but not medical treatment. The tragedy is that every day I receive letters from old people urging that certain bills be passed, when most of the writers wouldn't receive a single penny under any of them, with the possible exception of some phases of the Administration bill, which, as I say, is a hodge-podge hurriedly thrown together as a counter-irritant for the other bills. It is a tragedy that the old people of this country have been deceived about the contents of these bills. They think all their medical expenses, all their hospital expenses, and all their surgical expenses would be covered, whereas the neediest people wouldn't receive any benefits whatsoever.

Threat to doctor-patient relations

To me one of the greatest relationships that exists is that of patient and physician. These bills would certainly interfere with that relationship because, while they profess that the man is free to select his surgeons or free to select his hospital, he has to select a hospital or a surgeon who is under contract with the Secretary of Health, Education and Welfare or his agent. Furthermore, he cannot contract, however much he may need it, if he goes into a hospital under one of these bills, above the contracted for price of the hospital. Under the contract with the Secretary, he cannot make any contract to pay any more, even though he may need more than he is allowed.

One thing is certain: when the federal government begins to pay medical bills directly, the next step is standardization, and you are going to have standardization under the auspices of the federal government if one of these bills is passed. The Secretary of Health, Education and Welfare is to write regulations to carry out the provisions, and I doubt whether any of you physicians, except those engaged in public health work, really understand what this means.

The last time I was engaged in the active practice of law, I subscribed to the publication known as the Federal Register, which contains all federal regulations. As the issues came out, I had them bound and placed in my office for a period of 18 months. The regulations and changes in regulations for only 18 months occupied a space of about 28 inches, by actual measurement.

You are going to have these regulations, and you are going to have things standardized, and you are going to destroy one of the greatest human relationships known

to man, the relationship of physician and patient; and for that reason I look upon these bills with grave misgivings.

To repeat, I do think there is a problem here, but it lies in the case of persons on Old Age Assistance and those who have just enough to be excluded from that unfortunate group, but not enough to bear the cost of a long illness. That is a problem that the medical profession, the Congress, the state legislatures, and public health authorities must be concerned with. A solution must be found, but I do not think that it lies in the adoption of a system under which the federal government assumes the responsibility for the medical needs of virtually all of our elderly citizens. The people who should be helped are those who need help, and the rest should be allowed to act as free men and free women, as the Social Security system in its original concept contemplated.

I return to what I said at the beginning of this talk: that the kindest thing that can be done with this serious problem of the chronically ill is to postpone further discussion until the atmosphere is free from the political bargaining which is now going on in Washington in reference to the Presidential election of 1960.

Voluntary Health Insurance

In my opinion, the problem of the chronically ill cannot be met entirely by the voluntary insurance program. That is a marvelous program, however, and I want to call your attention to the astounding increase in the number of persons protected by it. The figures for 1957 indicate that 121 million people in the United States, or 72 per cent of the total population, had hospitalization insurance of some kind, as contrasted with 37 per cent who had hospital insurance 10 years before.

In 1957, 109 million persons in the United States (55 per cent of the total population) had voluntary insurance policies which took care of the hospital and surgical costs to some extent. In 1957, 57 per cent had health policies which provided for the payment of medical treatment, as distinguished from surgical treatment, in addition to hospitalization. In view of these figures, we should refrain from adopting any system which would tend to destroy the willingness of the American people to procure hospital, surgical, and medical insurance on their own volition.

The amounts paid under these plans is astounding. Also in 1957, 57 per cent of all the cost of hospital services in the United States and 31 per cent of all bills for surgical and medical expenses was paid by these voluntary plans. I hope that the services rendered by such organizations as Blue Cross and Blue Shield, which are doing a fine job in North Carolina, continue to expand, and that they will be even more widely accepted.

Some of the companies today are attempting to devise policies that cover the needs of the aged. One of the main arguments used for the Forand bill is the great spread of difference between the nonprofit organizations, which return about 97 per cent of their premiums in services to their policyholders, and the private insurance companies, which do not do anywhere near that well.

Conclusion

I believe in the expansion of nonprofit organizations. But when voluntary insurance is improved and extended, the problem that will still confront the medical profession, Congress, and the states is that of people receiving Old Age Assistance, and of those suffering long illnesses who are barely ineligible for Old Age Assistance. That is the problem that should concern you as well as the Congress and the state legislature.

Whatever we do, we must see to it that the personal relationship of physician and patient is preserved.

> The doctor's wife is truly the unsung hero of Medicine, because the extra hours of faithful service to patients and the hours spent attending medical meetings and studying the medical literature must be subtracted from the time the doctor would otherwise spend with his family. It has been said that the wife has the doctor when no one else wants him.—Rouse, M.O., South. M.J. 53:1 (Jan) 1960.

Leptospirosis

Report of a Case

WILLIAM A. LEONARD, JR., M.D.
GREENSBORO

For the past decade veterinarians have called attention to the occurrence of disease due to Leptospira in animal life in temperate climates. The disease in man has received some recent notice, but is probably more widespread than is generally known. In North Carolina it received wide recognition in 1942-1944, when it was determined that so-called "Fort Bragg Fever" was due to *Lept. autumnalis*[1]. Sporadic cases have been reported since[2], but the following is believed to be the first case reported from Guilford County.

It has been demonstrated in this state and elsewhere that a wide variety of domestic and wild animals harbor the organism[3]. The infection apparently presents a chronic problem in animals, with the excretion of Leptospirae in the urine for prolonged periods. Contrary to an earlier concept, apparently any animal may harbor any one of a variety of recognized serotypes of the organism which are present in the United States. In other words, there is no apparent animal or syndrome specificity.

Weil's disease, a fulminating form characterized by fever, jaundice, renal damage and hemorrhage, was originally presented as the classic form of the disease in man. In more recent years it has become obvious that the more common clinical syndrome is presented by a mild type of infection not unlike grippe, influenza, nonparalytic polio, or aseptic meningitis. Again, as in animals, any one of the leptospiral serotypes may result in a similar clinical picture. This similarity to other common and benign illnesses has undoubtedly been the main deterrent to its recognition.

Case Report

A 39 year old white male carpenter was well until two days before admission, when he noted the sudden and progressive development of profound fatigue, followed shortly by frank chilling, generalized muscular aching, a moderate generalized headache, and a fever of 104 F. The past history was not contributory.

Physical examination revealed an acutely ill, toxic individual in obvious discomfort. The conjuctivae were suffused. There were fine crepitant rales at the base of the right lung posteriorly and laterally. The heart was not remarkable except for an apical rate of 120. The abdomen was slightly distended but non-tender. The liver and spleen were not palpable, and no hepatic tenderness was demonstrated on percussion. The pharynx was minimally injected. No significant adenopathy was noted. The remainder of the examination was entirely within the limits of normal.

Laboratory findings: A urinalysis was negative. The blood count showed 8,500 white cells, with 86 polymorphonuclears, 1 eosinophil, 1 monocyte, and 12 lymphocytes. A serologic test for syphilis was negative. An electrocardiogram was within the limits of normal except for a sinus tachycardia. Roentgenograms of the chest showed prominent pulmonary markings at the right median base.

The initial clinical impression was that of primary atypical pneumonia of unknown etiology. Because of the patient's toxic state, however, he was started on therapeutic doses of chloramphenicol. Because of doubt concerning the diagnosis, blood was drawn at the time of admission for possible agglutination determinations later. A blood culture was not obtained.

Since antibiotic therapy had obviously brought about little improvement within 48 hours, it was discontinued. (Antibiotics have only questionable value in leptospirosis)[4]. At this time, the fine crepitant rales were continuously noted at the right base, and a few rales were present in the left base posteriorly. The patient continued to be acutely ill, and symptomatic treatment was used to control the muscular aching. The febrile course is noted on the accompanying chart (fig. 1). At this point, because of the continued presence of marked conjunctival suffusion, the possibility of leptospirosis was considered.

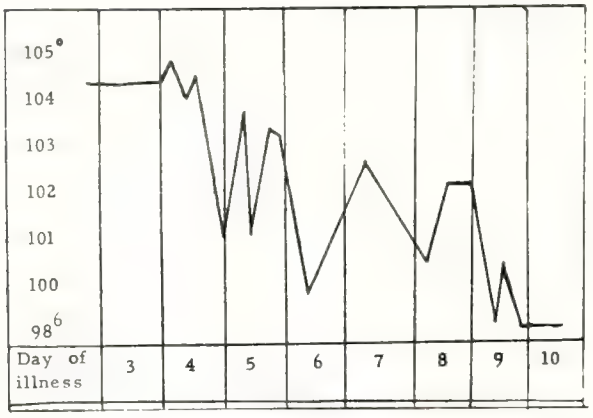


Fig. 1. Clinical course.

The fever and symptoms gradually diminished until the sixth day of illness, when the patient felt reasonably well. On this evening he was intermittently confused and disoriented. He awakened on the seventh day with a moderately severe headache, and nuchal rigidity was observed. A lumbar puncture was done, with an initial pressure of 230 mm. of water and a final pressure of 130 after the gradual removal of 10 cc. of a hazy fluid. The specimen contained 300 cells per cubic millimeter, predominently lymphocytes. The protein was 86 mg. per 100 ml. and the sugar 76 mg. per 100 ml. Culture was sterile on routine media. Fletcher's media was not available. The onset of the meningitis on the seventh day of illness and the characteristic spinal fluid changes[5] appeared to confirm the clinical impression of leptospirosis.

As will be noted on the accompanying clinical chart, the patient had some elevation of temperature following the onset of headache and stiff neck. The removal of spinal fluid promptly relieved the headache, which did not recur, and on the following day the patient felt well. Several days after discharge from the hospital he complained of visual blurring and was referred for ophthalmologic consultation with the presumptive diagnosis of leptospiral iridocyclitis. The consultant agreed and successfully treated the patient with topical steroid therapy. The subsequent course has been uneventful.

The pattern of antibody titer is shown in figure 2.

Comment

When the diagnosis was initially suspected, the patient and his family were questioned in detail concerning possible modes of exposure to the leptospiral organism. His occupation as a carpenter was not considered hazardous. He had not been swimming or wading in pools or streams that might have been contaminated. Four hunting dogs were kept penned on his property, but he admitted little or no contact with them. The State Board of Health investigated his home situation and initially determined that he had recently helped remodel an old house which was apparently infested with rats. The dogs were bled and all found to be positive to *Lept. canicola*. Since surveys had shown a percentage of healthy dogs to be chronic renal shedders[3] and since *Lept. canicola* was the serotype apparently responsible for the patient's illness, it seemed reasonable to assume that the dogs were the source of the infection.

Although the patient was exceedingly uncomfortable, the disease had a relatively brief and benign course. The iridocyclitis represented the sole residual defect, and this condition cleared with proper therapy. The complication has been previously reported[6]. The suffusion of the conjunctiva, which was present in 85 per cent of Edward's cases[7], actually presented the first clue to the proper clinical diagnosis.

The biphasic course of the disease is well demonstrated by this case. It will be noted that although the patient was clinically improved on the sixth day of his illness, he became somewhat confused and on the subsequent day showed obvious physical signs of meningitis. Whether this manifestation

L. autumnalis	neg.	4+	1+
L. australis A	-	4+	1+
L. ballum	-	4+	1+
L. bataviae	-	3+	-
L. canicola	-	4+	4+
L. hebdomalis	-	3+	-
L. hyos	-	-	-
L. icterohem	-	3+	1+
L. pomona	-	3+	1+
L. pyrogenes	-	2+	-
L. sejroe	-	3+	-
L. grippotyph	-	3+	1+
Day from onset of illness	7th.	14th.	26th.

Fig. 2. Serial agglutination determinations.

might be more properly referred to as meningoencephalitis is not clear at this time.

The explanation for the biphasic pattern has not been clarified. There is apparent general agreement that the first-stage manifestations are directly related to leptospiremia. A positive blood culture is said to be possible only during this phase. The role of hypersensitivity in the pathogenesis of the second phase has been mentioned by several authors. Middleton[7] proposed a hypersensitivity reaction to account for the neurologic lesions, and Davidson[8] considered "after-fever" to be an allergic phenomenon. Edwards[6e] also expressed the opinion that the second stage appeared to be the consequence of the body's immunologic responses.

In this temperate climate leptospiral infections probably have seasonal variation, in contrast to the lack of variation in tropical areas where animal and human activities, high humidity, and temperatures are more constant. Humbert[2] considered the wet spring months, with their high waters and floods, a possible high-incidence period.

Headache is present in all and conjunctival suffusion in 85 per cent of the cases. A macular or maculopapular generalized eruption appears between the fourth and eighth day in 25 per cent. Nonspecific gastrointestinal symptoms are commonly present, and a generalized lymphadenopathy occurs in 40 per cent. The incidence of meningitis in these cases is not known, but it appears to develop on or about the seventh day of illness. Hepatomegaly, icterus, and albuminuria may be present, but splenomegaly is rare. Cough is reported in 25 per cent of the cases and pneumonitis is seen radiographically[9]. From a review of the available literature, the pulmonary findings do not appear to have been adequately investigated.

From this summary of the symptoms and physical findings it is clear that the syndrome may mimic many common infectious diseases. It would appear that milder forms of leptospirosis have gone unrecognized, and it remains for us to encourage a search for the disease by simple laboratory procedures in all cases of obscure and unexplained febrile illnesses.

Summary

A case of leptospirosis caused by *Lept. canicola* is reported. It is considered to be the first such report from Guilford County.

The widespread animal reservoir of infection in this state is noted.

The diagnosis should be considered in all acute febrile illnesses associated with headache, temperature elevation, myalgia, conjunctival suffusion, pneumonitis, and where "asceptic meningitis" or other cerebral symptoms develop on or about the seventh day.

It is further suggested that suitable culture material be made available at the local county health level for possible earlier diagnosis.

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Salmonella and Shigella Infections Found In One Hundred Ninety-five Cases of Acute Diarrhea

E. R. Caldwell, Jr., M.D.
and
E. A. Abernathy, M.D.
Statesville

In October, 1952, it was decided that all patients admitted to this small general hospital with a chief complaint of diarrhea would have a single stool culture prior to the institution of any therapy. This culture was taken from the first stol passed, and therapy was then started. Blood cultures were made in only a few selected patients in whom the illness seemed more severe. Routine blood tests (hemoglobin determination, red blood cell count, white blood cell count, and erythrocyte sedimentation rate) and urinalyses were carried out, but are not analyzed in this report. The study was conducted to determine the bacteriologic content of a single stool culture. It is realized that in private practice one cannot pursue as thorough a bacteriologic analysis as would be possible in a teaching hospital; however, we believe that a single specimen collected and mailed to the State Laboratory may be quite revealing in determining the cause of diarrhea in some cases.

Results

Table 1 shows that out of 195 cultures 23 pathogenic organisms were isolated—an incidence of 11.8 per cent. Probably this figure would have been higher if repeated cultures had been made. Twelve Salmonella and 11 Shigella organisms were isolated. One case of *Salmonella typhosa* was discovered, but was not included in this series because no diarrhea was present. A diagnosis was made seriologically and finally proven bacteriologically when a positive stool culture was obtained after several attempts.

From Davis Hospital, Statesville, North Carolina.

We are indebted to the North Carolina State Laboratory of Hygiene for the bacteriologic studies.

Table 1

I	Salmonella		
	Montevideo		
	Typhimurium		
	Derby		
	Enteritidis		
	Senftenberg		
	Javiana		
II	Shigella		
	Sonnei	I	
	Flexneri	3	
	Flexneri	6	
	Sonnei	II	
	Negative Cultures		172
	Positive Cultures		23
	Total Cultures		195
I	Salmonella		
	Typhimurium		7
	Montividео		1
	Derby		1
	Enteritidis		1
	Senftenberg		1
	Javiana		1
	Total		12
II	Shigella		
	Sonnei	I	5
	Sonnei	II	1
	Flexneri	6	4
	Flexneri	3	1
	Total		11

Conclusions

Though trained bacteriologists are not available in all hospitals and private office laboratories, it is possible, by using available facilities, to isolate many pathogenic organisms and so achieve a somewhat more scientific approach to our practice. It is gratifying to be able to make a definite diagnosis in some of the otherwise obscure types of diarrhea.

Every human being has an innate dread of illness, and brings to his doctor his fears, his hopes, and his confidence. Medical care is very definitely a personal service. Science is a requisite but without sympathy is woefully inadequate.—Rouse, M.O.: Essential "Intangibles" in Medicine, South. M. J. 53:1 (Jan.) 1960.

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NAMING NEW DRUGS

The rapid multiplication of new drugs is creating a real problem for physicians, medical students, and pharmacists. It is well nigh impossible to memorize even the names of the hundreds of new preparations marketed every year—much less to learn their indications, contraindication, side-effects, and dosage. The confusion is compounded by the fact that every drug has at least three names: chemical, generic, and brand. The chemical names, while admittedly more scientific, have a very limited application for the average medical man. Generic is used in the sense of Webster's definition, "General; opposed to specific." The brand names are selected by the manufacturers and are copyrighted. As an extreme example, there are more than 18 brand names for reserpine. If a doctor prescribes a drug by its generic name, the druggist is not obligated to use the product of any one manufacturer. If, however, the brand name is used, the druggist must use the one specified.

The manufacturers seek to justify the use of brand names as necessary to insure that the drug meets the proper standards in its preparation and that inferior products are not sold. The widespread use of copyright brands, however, imposes a hardship on the doctor, who has trouble enough remembering simple generic names; on the druggist, who must carry in stock many forms of the generic drug; and on the consumer, who must pay more for the additional expense entailed in marketing and advertising the product.

The Advertising Committee of the *New England Journal of Medicine* (vol. 263:1, July 7, 1960) offers a most constructive solution of this problem of naming new drugs. A special article, "Drug Terminology and the Urgent Need for Reform," concludes with the following pertinent suggestions:

> The generic term must be selected and made available for every new drug before it is put on the market. This should be a requirement of the Food and Drug Administration. Generic names should be selected by a National Advisory Committee appointed by the Food and Drug Administration. This committee should consist of experts in medicine, pharmacy, psychology and marketing. The terms must be brief and designed with regard for their dignity, visual and oral reception and mnemonic connotations. Certainly, such an expert committee could design much better generic terminology than is at present available.
>
> Once the generic term is selected and adopted it must represent the highest standards available for that product . . . Once this is done the physician can be certain of the drug his patient will receive.
>
> The medical profession should engage in a campaign to urge physicians to give generic names prominence in all medical writing, advertising and usage. Medical journal editors should join in this campaign and see to it that generic terminology is the terminology of choice in advertising.
>
> A monthly glossary of generic names and the standards that they represent should be published in leading medical journals and perhaps sent to physicians by the Food and Drug Administration.
>
> Finally, many medical authorities agree that inclusion of the manufacturer's name after the generic name would in the end give him equal protection and even more favorable recognition than the present undesirable trade-name practice. For the belief is growing that a manufacturer's reputation and good will are associated rather with his company name than with

fanciful copyrighted and generally inane neologisms.

As Editor Joseph Garland comments in the same issue:

> If manufacturers will have only enough faith in themselves to rely on their institutional reputation to assure the purchaser that their particular product is an especially reliable one, they will almost certainly gain additional prestige with the professional men and women whom they are trying to impress.
>
> With the scrupulous observance of such policies the management of drug therapy would be even more solidly vested in the medical profession, where all would agree that it belongs. It may be expected that the advertiser who appeals to the intelligence of his professional clientele will not lose by such a display by confidence.

It is devoutly to be wished that these constructive suggestions of our New England contemporary will be accepted.

* * *

THE ARTHRITIS HOAX

The Public Affairs Committee, a nonprofit organization, in cooperation with the Arthritis and Rheumatism Foundation, has prepared a 20-page pamphlet, "The Arthritis Hoax," which exposes the many ways by which victims of arthritis are exploited to the tune of more than 250 million dollars a year by worse than useless drugs, devices, and treatments, ranging from copper bracelets to "uranium mines," and from dietary fads to analgesic drugs. The pamphlet is sold for 20 cents by the Public Affairs Committee—22 East 38th Street, New York 16. It gives the answers to many of the questions that patients are apt to ask the doctor, and is well worth the price.

* * *

PSYCHIATRIC PATIENTS IN A GENERAL HOSPITAL

" 'Tis true, 'tis pity; and pity 'tis, 'tis true" that there is a certain stigma attached to being treated in a hospital devoted entirely to mentally ill patients. The psychic trauma of such an experience may intensify the patient's illness—especially in mental depression, which is one of the most frequent ailments for which doctors are consulted. It is a cause for giving thanks that so many general hospitals now admit psychiatric patients.

An editorial in the July *Southern Medical Journal* states that at the turn of the century only 25 general hospitals had a psychiatric service. The number had increased to 200 by the end of World War II, in 1945, and by 1957 there were 584. Many more have let down their bars since then. In some of these the psychiatric division is closed, but in perhaps most of them it is open, and patients may be given insulin and electroshock therapy in their rooms.

Any doctor who has had to deal with "borderline" cases, such as mental depression or anxiety states, can appreciate the advantage of having such patients in a general hospital. And as the *Southern Medical Journal* editorial points out, the admission of psychiatric patients to a general hospital has educational and training value both for the psychiatrist and for the house staff. It will be gratifying to see the increasing use of general hospital beds for mentally ill patients.

* * *

THREE CORRECTIONS

Three mistakes were made in the June issue editorial, One Hundredth Sixth Annual Session.

1. That the wrist watch presented Jim Barnes was a gift from the Society. The watch was given him by the past presidents who have served with him since he became our Executive Secretary, as a token of their appreciation of his ability.

2. The statement that Billy Joe Patton was Dr. Leonard Larson's son-in-law. Mrs. Patton is a sister of Mr. John Collett of Lenoir, and Mrs. Collett is Dr. Larson's daughter. Although the editor's face is red, he—and all other North Carolina doctors—is glad to know that Dr. Larson, now President-elect of the American Medical Association, does have a daughter living in the state, who will be a strong inducement for him to visit us often.

3. The most serious error was a proofreading lapse. The statement that the motion to table the resolution from the Lenoir Jones-Green Component Society to limit the term of councilors "was defeated by a vote of 55 to 48" should have read, "was passed by a vote of 55 to 48."

Three boners in one editorial is a record of which the editor is thoroughly ashamed —and for which he has no one to blame but himself. He can only promise to try to do better in the future.

DR. PRESTON—NEW EDITOR OF HEALTH BULLETIN

In 1942 Dr. John H. Hamilton added to his other duties as Assistant State Health Director and Director of the State Laboratory of Hygiene the editorship of *The Health Bulletin.* When the time came for him to retire for chronologic reasons, the very satisfactory way he has filled all three positions was recognized in an appreciation from the State Board of Health. This was published in the May *Health Bulletin* together with his picture on the cover—without his knowledge or consent. This same appreciation appeared in the June issue of the NORTH CAROLINA MEDICAL JOURNAL.

The Board of Health was fortunate in being able to fill Dr. Hamilton's place without delay. Edwin S. Preston, M. A., LL. D., who has been selected to succeed Dr. Hamilton is well qualified for the position. For eight years he edited the *Public Welfare News,* the official publication of the North Carolina Board of Public Welfare. He was also the Welfare Board's public relations officer. In December, 1959, he came to the State Board of Health as its public relations officer—so he is a "natural" for the editorship of the *Bulletin.*

Dr. Preston is a graduate of the University of Tennessee and has an M. A. degree from Mercer University. The honorary degree of LL. D. was conferred by Baylor University. This journal echoes the words used by Dr. Roy Norton in the June *Health Bulletin,* introducing him to the readers of the *Bulletin.* Dr. Norton bespoke for Dr. Preston "the same fine and helpful criticism and assistance that has been given to his predecessor by the friends who receive *The Health Bulletin.*"

* * *

"YOU ARE OLD, FATHER WILLIAM . ."*

Not so long ago, it seems, old people were just old people, gentle, withering relics of the past typified by Whistler's portrait of his mother. True, they had their problems then, but who hadn't? Some were incapacitated, other spry; some were broke, others solvent; some were happy, some sad.

Now our modern old people, more numerous than before, thanks to modern doctors, modern medical science, and modern private enterprise in medicine, have been metamorphosed. From being just old people they have become recently desirable, valuable political assets! Each has a genuine exercisable franchise; some 15,000,000 potentially purchasable ballots! Purchasable by inducement—not in cash but by "benefits."

Both major political parties are offering bids, the Democrats a Forand-type bill, the Republicans a Javits-type bill. Suddenly the health of the aged becomes the grave concern of others besides the doctors.

Assuredly the old folks have not offered their votes for sale; the most many ask for is the privilege of continuing to work gainfully after sixty-five, not for a pittance but according to their ability to earn and to pay their taxes, employ their own doctors, and buy their own insurance.

In all the election year turmoil over the health of the old who hears any concern expressed over the employers, the business men, the small and large shop operators, and others, men who create employment for the young? In this election year and every year, many thousands of young people will for the first time have fastened about their necks the yoke of withholding taxes, Social Security taxes, rent, state, local taxes, union dues, and the national debt. The young—don't they enjoy the prospect of some forty-seven years of work-filled and tax-ridden pursuit of happiness?

The young people—will they not find it increasingly difficult in this inflation-ridden election year and those to follow to buy bread for themselves and their children? Who cares? Let them eat cake! They are only the young. Will they find in their midst anyone to arise and say in a loud voice to politicians of both parties: Thou shalt not press down upon the brow of youth a crown of aging thorns!

* * *

NORTH CAROLINA'S COMMITTEE ON MEDICAL CREDIT BUREAUS

The May issue of the A.M.A.'s *PR Doctor* devotes more than two columns to a very favorable discussion of the work done by the Medical Credit Bureau Committee of our State Society, of which Dr. Howard Wilson of Raleigh is the chairman. Dr. Wilson and his committee deserve much credit for their fine work.

*Reprinted from the New York State Journal of Medicine, May 15, 1960.

Committees and Organizations

North Carolina Board of Medical Examiners

THE BIENNIAL REGISTRATION ACT

The second registration of physicians in North Carolina was completed in January, 1960. The registration went along smoothly. The directory has been completed and mailed to each physician. However, some of our friends exercised their inalienable right to register their objections to the registration. These, however, seemed to forget that this law was sponsored by the Medical Society, under the directive of the House of Delegates of 1956. The complainant is usually concerned only with the fact that he has to pay a fee and does not consider what is best for the group as a whole. It is a recognized principle of all people who deal with licensure that registration is necessary to keep the records and the office running smoothly for the benefit of all physicians. Registration was not put into effect as a revenue measure, but all the funds go into the treasury of the Board and thereby enable the Board to serve better the physicians and all citizens of the State of North Carolina.

A native son recently returned to North Carolina for practice. He had been away so long he did not know of the registration. When he registered, the office noted that an official notice had been received from the secretary of a board of medical examiners of a distant state that this physician's license had been revoked, but sentence had been suspended on conditions. The Board has interviewed this physician. He has an opportunity for rehabilitation under supervision.

The law as enacted was a compromise draft to overcome the objections presented to the Legislative Committee of the Medical Society. The result has been that the Board has been embarrassed on a number of occasions by not having the power to waive the penalty under conditions upon which some people were late in registering. The other professions and trades in North Carolina controlled by a board have annual registration. Their fees equal or are more annually in the majority of the cases than the fee which the physician pays every two years.

The Board wishes to express its appreciation to the leaders of the Medical Society of the State of North Carolina, to the editorial staff of our JOURNAL, and to the greater majority of the physicians of this state who have accepted and co-operated with this registration. It will be our aim to continue to serve the citizens of our state in our official capacity as a part of the state government.

JOSEPH J. COMBS, M.D., Secretary
North Carolina Board
of Medical Examiners

BULLETIN BOARD

COMING MEETINGS

State

North Carolina and South Carolina Eye, Ear, Nose and Throat Societies' Annual Joint Meeting—Hotel King Cotton, Greensboro, September 11-14.

Fourth District Medical Society Meeting—Wilson, September 14.

North Carolina Urological Association, Annual Meeting—Greystone Inn, Roaring Gap, September 25-26.

North Carolina Fifth District Medical Society Meeting—Mid Pines Club, Pinehurst, October 5.

North Carolina Society for Crippled Children and Adults, Twenty-fifth Annual Meeting—Washington Duke Hotel, Durham, October 6-8.

A.M.A. Twentieth Annual Congress on Industrial Health—Charlotte, October 10-12.

Duke University Medical Postgraduate Seminar Cruise to the West Indies—November 9-18.

North Carolina Academy of General Practice, Annual Meeting—Carolina Hotel, Pinehurst, November 27-30.

Regional and National

Fifth International Congress on Nutrition—Sheraton Park and Shoreham Hotels, Washington, D.C., September 1-7.

Southern Trudeau Society and Southern Tuberculosis Society Meeting—Hotel Francis Marion, Charleston, South Carolina, September 14-16.

A.M.A. First Regional Conference on Rural Health, Atlanta, Georgia, October 7-8.

American Rhinologic Society, Sixth Annual Meeting—Belmont Hotel, Chicago, October 8.

American College of Surgeons, Forty-sixth Annual Clinical Congress—San Francisco, October 10-14.

Southeastern Allergy Association, Annual Meeting—Atlanta Biltmore Hotel, Atlanta, Georgia, October 21-22.

Southern Medical Association, Fifty-fourth Annual Meeting—Saint Louis, Missouri, October 31-November 3.

Sixty-seventh Annual Convention of Military

Surgeons—Washington, D.C., October 31-November 2.

American Medical Writers' Association, Seventeenth Annual Meeting—Morrison Hotel, Chicago, November 18-19.

Southeastern Region of the College of American Pathologists and the Virginia Society of Pathologists, Seminar on Kidney Diseases—John Marshall Hotel, Richmond, November 25-26.

New Members of the State Society

The following new physicians joined the Medical Society of the State of North Carolina during the month of July.

Dr. Charles Bodine Neal, III, Duke University School of Medicine, Durham; Dr. John William Ormand, Jr., 309 Lancaster Avenue, Monroe; Dr. William Thomas Rice, 318 Mocksville Ave., Salisbury; Dr. Sigurd Carl Sandzen, McCain Sanatorium, McCain; Dr. Casper Carl Warren, Jr., 2016 Pershing St., Durham; Dr. Daniel Whitaker Davis, 1415 Ida Street, Durham; Dr. George Wesley Gentry, Jr., 607 S. Main St., Roxboro; Dr. Stuart Boatwright, Haywood County Hospital, Waynesville; Dr. Joe Walton Frazer, Jr., 838 N. Elm St., Greensboro; Dr. Howard Scheyer Wainer, 1001 N. Elm St., Greensboro; Dr. George Carl Alderman, 1019 Hawthorne Road, Wilmington.

News Notes from the University of North Carolina School of Medicine

Several University of North Carolina School faculty members are engaged in mid-summer work in various parts of the world.

Dr. Hans H. Strupp, director of psychological services in the School of Medicine, has been awarded a grant from the National Institute of Mental Health to organize a second conference on research in psychotherapy to be held in Chapel Hill next spring. The conference will be sponsored by the American Psychological Association.

Dr. Carl E. Anderson, professor of biochemistry, is serving as a visiting scientist in the laboratory of nutrition and endocrinology at the National Institutes of Health in Bethesda, Maryland.

Dr. Colin G. Thomas, Jr., associate professor of surgery, and Dr. Judson J. Van Wyk, associate professor of pediatrics, are in London to participate in the fourth International Goiter Conference meeting.

Dr. Ernest Craige, associate professor in the Department of Medicine, has returned from South America where he served as a visiting professor in the Department of Internal Medicine at the University of Del Valle in Cali, Colombia.

Leaving in August for Alexandria, Egypt, Dr. Sidney S. Chipman, clinical professor of pediatrics, will begin a one-year foreign teaching assignment sponsored by the World Health Organization. He will act as a visiting professor of social pediatrics at the Higher Institute of Public Health.

A recent issue of a Swiss medical journal contains an article by Dr. John A. Ewing, associate professor of psychiatry at the University of North Carolina School of Medicine.

The article, entitled **"Nos malades et nos contacts personnels avec eux,"** appears in **Medecine et Hygiene,** which is printed in Geneva.

In his paper Dr. Ewing explains how the physician needs to learn to observe his feelings about his patients. Some feelings may arise because of factors within the doctor, or his patient may remind him of someone else. Some patients frequently provoke special feelings in other people in almost all personal contacts.

If the physician is to control the relationship and to use it for therapeutic purposes, he must observe and identify his feelings about his patient, Dr. Ewing points out. The way the patient "makes" the doctor feel about him can be seen as similar to any symptom about which the patient may complain. The physician needs to understand this aspect of the patient as much as anything else he finds in his examination, he said.

* * *

Dr. John K. Spitznagel of the University of North Carolina School of Medicine recently gave a seminar at the University of Florida in Gainesville, Florida, where he spoke on "The Role of Basic Proteins in Non-specific Resistence to Infection."

* * *

Dr. John H. Schwab, assistant professor of bacteriology of the University of North Carolina School of Medicine, has gone to England to do a year's research at the Lister Institute of Preventive Medicine in London. He will work in the area of natural resistence to infections.

* * *

A new brochure has been issued by the University of North Carolina Division of Health Affairs which gives a thumbnail sketch of the various educational programs being offered by the University Medical Center.

Designed primarily for high school and junior college students, the illustrated brochure ranges in content matter from the one-year training program for dental assistants to the specialized programs for medical doctors.

Copies are available to students, educators and other interested persons. They may be obtained by writing to the U.N.C. Director of Admissions or to the School of Medicine.

* * *

Ellen Anderson of the University of North Carolina School of Medicine was named president-elect of the American Society of Medical Technologists at the annual convention of the organization in Atlantic City, New Jersey recently.

She will hold this office for one year and then be installed as president of the professional society, which has 8,000 members. The convention was attended by 2,000 medical technologists.

Since 1953 Miss Anderson has been chief cytotechnologist in the Department of Pathology and at the North Carolina Memorial Hospital.

* * *

Four faculty members of the section of Physical Therapy of the University of North Carolina School of Medicine attended the national conference of the American Physical Therapy Association in Pittsburgh recently. They were Miss Margaret Moore, head of the section; Miss Rachel Nunley, Miss Mildred Wood, and Miss Enola Sue Flowers.

Miss Moore addressed the Public Health Section of the Conference on "Public Health in Physical Therapy Education." She also attended a number of sessions of the Council of Physical Therapy School Directors, which also met in Pittsburgh during the association meeting.

Miss Wood is chairman of the Committee on Graduate Study of the American Physical Therapy Association and she reported on the activities of the association in this field.

Dr. Charles E. Flowers of the Department of Obstetrics and Gynecology addressed a meeting of the Continental Gynecologic Society in Montreal, Canada, on June 27-28. His topic was "Magnesium Sulfate Therapy During Pregnancy."

* * *

Dr. Harrie R. Chamberlin of the Department of Pediatrics spoke before a seminar at the West Virginia University School of Medicine in Morganton, West Virginia on June 29-30. His topic was "Intrauterine Development and Environment." The seminar is sponsored by the West Virginia State Department of Health and the Children's Bureau of the U. S. Department of Health, Education and Welfare.

* * *

A new book entitled "Psychotherapists in Action" has been published concerning the research program being conducted by an associate professor of psychology in the Department of Psychiatry at the University of North Carolina School of Medicine.

The work is by Dr. Hans H. Strupp, who also is director of psychological services of North Carolina Memorial Hospital here at the University. The publishers are Grune and Stratton of New York.

This volume deals with how psychiatrists and psychologists arrive at various conclusions and judgments on the cases which they are treating psychologically, and how they communicate with their patients.

Dr. Strupp worked with some 200 psychotherapists in collecting material for this book. Selected reports from some 40 of these persons are contained in this volume.

* * *

Dr. Carl W. Gottschalk, associate professor of medicine, is transferring his research relating to kidney functions from Chapel Hill to the University of Copenhagen, Denmark, for a period of one year.

In Denmark, Dr. Gottschalk will be associated with Dr. Hans Ussing of the Institute of Biological Chemistry at the University of Copenhagen. The year's program is co-sponsored by the American Heart Association and the U. S. Public Health Service.

News Notes from the Bowman Gray School of Medicine of Wake Forest College

Dr. Donald M. Hayes, instructor in medicine, has been appointed assistant dean of the Bowman Gray School of Medicine. In his new work, Dr. Hayes will be responsible for student admissions and premedical relations. He will continue as a full-time member of the Department of Internal Medicine with active participation in teaching, and research in hematology.

Dr. Hayes is a 1951 graduate of Wake Forest College and received his medical degree from Bowman Gray. He has taken postgraduate training in medicine at the Salt Lake County General Hospital, Salt Lake City, Utah, and served as a U. S. Public Health Service Fellow in Psychiatry for one year at the Louisville General Hospital, Louisville, Kentucky. In 1958 he completed his internal medicine residency at the North Carolina Baptist Hospital.

For the past two years Dr. Hayes has served as a hematologic fellow in medicine at Bowman Gray, and for the past year has been instructor in medicine.

* * *

A total of $19,440 has been received for five cancer traineeships for young physicians in the Departments of Medicine, Obstetrics-Gynecology, Pathology, Radiology, and Surgery at the Bowman Gray School of Medicine.

This training program has been established by the National Cancer Institute in order to increase the number of persons with broad medical experience and special orientation in cancer.

The recipients of the traineeships for this year are: Drs. Edwin L. Auman, Department of Medicine; J. Howard Young, Department of Obstetrics-Gynecology; Robert S. Pool, Department of Pathology; Samuel D. Pendergrass, Department of Radiology; and Richard F. Bowling, Department of Surgery.

* * *

Dr. Camillo Artom, professor of biochemistry, and Dr. Hugh B. Lofland, assistant professor of biochemistry, are the co-authors of a paper which was presented at the Fifth Conference on the Biochemical Problems of Lipids held in Marseilles, France, July 21-23. The title of their paper is "Incorporation of Ethanolamine and Phosphorylethanolamine into the Phospholipids of Liver Preparations."

Dr. Richard G. Kessel, instructor in anatomy, has been awarded a postdoctoral fellowship by the Division of General Medical Sciences of the U. S. Public Health Service. These fellowships are awarded to assist in the development of promising investigators in basic science fields. Dr. Kessel's special research interest and training have been in electron microscopy.

* * *

The U. S. Public Health Service has awarded a grant of $19,665 to Dr. Robert P. Morehead, director of the Department of Pathology, and Dr. J. H. Smith Foushee, assistant professor of pathology. The official title of the grant is, "Community Cancer Demonstration Project Grant to Train Cytotechnicians."

For some time now, the Bowman Gray School of Medicine has supported the training of a limited number of student in exfoliative cytotechnology, and this grant will permit expansion of the training program and an increase in the number of students.

News Notes from the Duke University Medical Center

A pilot study aimed at helping persons disfigured by injury or disease has been initiated at the Duke University Medical Center.

The study is being conducted by the Center's Department of Medical Art and Illustration with financial support from the Office of Vocational Rehabilitation, U. S. Department of Health, Education and Welfare. Prof. Elon Clark is head of the department.

Purpose of the project is to work toward the production of better artificial noses, and other parts of the face.

* * *

Research funds amounting to $39,900 have been awarded to Duke University by the National Science Foundation to support continuing investigations of brain functions.

Dr. Talmadge L. Peele, associate professor of anatomy in the Duke Medical Center, is principal investigator for the project. Entitled "Interdependence of Amygdala and Hypothalamus," the research study is concerned with learning more about the relationships between these two parts of the brain.

* * *

F. Ross Porter, director of the Duke Medical Center Foundation, has resigned to accept a position as hospital advisor with the International Cooperation Administration.

He will begin his first assignment in Bogota, Colombia, early next year after several months of orientation and other preparation. His duties will be to work with the ICA and the Colombian government in developing a national pattern for improvement of hospital and health services in Colombia.

A.M.A. Industrial Health Congress

The Twentieth Annual Congress on Industrial Health will be held in Charlotte, North Carolina, October 10-12, under the sponsorship of the Council on Occupational Health of the American Medical Association.

The program will include discussions of occupational health in agriculture, mental and emotional health in industry, problems in dermatitis in farm and industry, and occupational health problems in small employee groups.

Established in 1938, the council supports safe and healthful working conditions for employees through medical supervision of workers, control of environment, health education, and counseling, according to B. Dixon Holland, M.D., council secretary. The congress is sponsored each year by the American Medical Asscіation as a means of furthering the development and maintenance of high medical standards in industry and on the farm.

Approved for Category II credit for members of the American Academy of General Practice, the program is primarily directed toward the general practitioner, whom, it is estimated, handles close to 90 per cent of all the occupational medical practice in the nation.

Presiding over the opening session of the congress will be Dr. William P. Shepard of New York City, chairman of the A.M.A. Council on Occupational Health. The meeting will begin at 2:00 p.m. on Monday afternoon with Dr. Amos N. Johnson of Garland, president of the Medical Society of the State of North Carolina, as the first principal speaker. The sessions continue through Wednesday morning, including formal presentations by nationally known speakers.

Cooperating sponsors include the Medical Society of the State of North Carolina, the Governor's Council on Occupational Health, the Mecklenburg County Medical Society, and the Greater Charlotte Occupational Health Council.

North Carolina Academy of General Practice

The annual meeting of the North Carolina Academy of General Practice will be held at the Carolina Hotel in Pinehurst, November 27-30.

The scientific sessions will be held daily from 9:00 a.m. to 12:30 p.m., leaving the afternoons free for audiovisual presentations, golf, or relaxation among friends.

Fourth District Medical Society

The Fourth District Medical Society will meet in Wilson on September 14 at 6:30 p.m. Dr. Franklin L. Angell of Roanoke, Virginia, will speak on the subject "Premature Cranial Synostosis."

Edgecombe-Nash Medical Society

The Edgecombe-Nash Medical Society met on July 13 in Rocky Mount.

Dr. R. D. Kornegay, program chairman for July, presented Dr. James Ralph Dunn, Jr., who spoke on the subject of vascular surgery.

News Notes

Dr. Robert E. Nolan has announced the opening of his office at the O'Hanlon Building in Winston-Salem. His practice will be limited to general surgery.

Southeastern Allergy Association

The Southeastern Allergy Association will hold its annual meeting at the Atlanta Biltmore Hotel, Atlanta, Georgia, October 21 and 22, 1960.

Dr. Susan Dees, Duke Medical Center, Durham, North Carolina is in charge of the program. Everyone interested in allergy is invited to attend.

Southern Medical Association

A complete history of the 54-year old Southern Medical Association comes off the press August 15.

Its author is C. P. Loranz, Birmingham, for many years business manager and secretary-manager of Southern Medical, now advisor and professional relations counselor.

The history details the association's growth from its beginning in 1906, and includes statistical data on officers, places of meeting, research awards and membership figures, in addition to numerous photographs.

Georgia Warm Springs Foundation

Preliminary steps in a projected program to convert the famed Georgia Warm Springs Foundation into a general vocational rehabilitation center serving the southeastern United States were announced recently.

With the decline in polio that has followed the advent of the Salk vaccine five years ago, Warm Springs has begun to utilize its vast rehabilitation facilities to care for physical handicaps caused by arthritis, birth defects, spinal cord lesions, cerebral vascular accidents, multiple sclerosis, and other disabling neuromuscular disorders.

Seminar on Kidney Disease

The Southeastern Region of the College of American Pathologists and the Virginia Society of Pathologists will hold a joint meeting at the John Marshall Hotel in Richmond, Virginia, on November 25 and 26, 1960, on kidney disease. The speakers will include Drs. Stanley M. Kurtz, Peter P. Ladewig, Henry D. McIntosh, George Margolis, Conrad L. Pirani, David E. Smith, and Max Wachstein. The slide seminar will be conducted by Drs. Paul Kimmelstiel and Solomon Papper. The dinner speaker will be Dr. Frank C. Coleman, president of the College of American Pathologists.

The slide sets for this seminar on kidney disease may be purchased at a cost of $15.00 per set by writing to: Dr. G. T. Mann, Professor of Forensic Pathology, P. O. Box 41, Medical College of Virginia, Richmond 19, Virginia.

American Society for Clinical Nutrition

The formation of a new professional association, the American Society for Clinical Nutrition, was announced during the meetings of the American Society for Clinical Investigation and the American Federation for Clinical Research in Atlantic City recently. Arrangements are being made to affiliate the A.S.C.N. with the American Institute for Nurition.

Richard W. Vilter, M.D., professor of medicine and chairman of the department, University of Cincinnati, College of Medicine, was elected president of the A.S.C.N. by the charter members at the organization's first meeting.

A four-point list of objectives adopted at the first meeting states that the A.S.C.N. shall:

1. Foster high standards for research on human nutrition.
2. Promote undergraduate and graduate education in human nutrition.
3. Provide a place and opportunity for research workers on problems of human nutrition to present and discuss their research activities and results.
4. Provide a journal for the publication of meritorious work on human nutrition.

The organizing group plans to adopt **The American Journal of Clinical Nutrition** as its official publication. The journal is published by the Yorke Group, a subsidiary of the Reuben H. Donnelley Corporation.

American Rhinologic Society

The American Rhinologic Society will hold its sixth annual meeting at the Belmont Hotel, Chicago, October 8. Physicians are invited; there is no registration fee.

The guest of honor and one of the afternoon speakers will be Dr. Henry L. Williams of the Mayo Clinic, Rochester, Minnesota, whose subject will be "Thirty Years of Experience in Rhinology." The dinner speaker will be Dr. Morris Fishbein, Chicago, who will speak on "Fifty Years of Medical Progress."

A two-day surgical seminar in the Illinois Masonic Hospital, Chicago, will immediately precede the annual meeting.

For information, write Dr. Robert M. Hansen, secretary, American Rhinologic Society, 1735 North Wheeler Avenue, Portland 17, Oregon.

National Tuberculosis Association

A potential danger in the long-term use of steroid hormones was dramatized in a special exhibit prepared by the National Tuberculosis Association for the one hundred ninth annual meeting of the American Medical Association in Miami Beach.

On view before the A.M.A. members for the first time, the exhibit, entitled "Steroids Activate TB," reminded physicians that cortisone and related drugs can activate unsuspected latent tuberculosis.

The N.T.A. exhibit, winner of an A.M.A. Honorable Mention award, was prepared under the direction of Dr. Julius L. Wilson and Dr. Floyd M. Feldmann of the American Thoracic Society (N.T.A. Medical Section).

Fifth International Congress on Nutrition

Nutrition scientists from all over the world will participate in the Fifth International Congress on Nutrition to be held in Washington, D. C., September 1-7, 1960. An all-day symposium on "World Food Needs and Food Resources" will be one of the main features of the scientific program. The remainder of the program will consist of seven half-day panel discussions by invited participants, and special sessions of 10-minute papers reporting unpublished original research. Headquarter hotels will be the Sheraton Park and Shoreham hotels.

American Urological Association

The American Urological Association offers an annual award of $1,000 (first prize of $500, second prize $300, and third prize $200) for essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been graduated not more than 10 years, and to hospital interns and residents doing research work in urology.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Hotel Biltmore, Los Angeles, California, May 22-25, 1961.

For full particulars write the Executive Secretary, William P. Didusch, 1120 North Charles Street, Baltimore, Maryland. Essays must be in his hands before December 1, 1960.

World Congress of Psychiatry

The Third World Congress of Psychiatry, June 4-10, 1961, Montreal, Canada, is being held at the invitation of McGill University and under the auspices of the Canadian Psychiatric Association. Meeting on the American Continent for the first time, the Congress is expected to attract some 3,000 delegates from 62 nations. Representatives will come from psychiatry and such allied fields as general medical practice, psychology, biochemistry, nursing, sociology, anthropology, social work, and pharmacology.

Copies of the Second Announcement, which carry information regarding program and registration, may be obtained by writing the General Secretary, III World Congress of Psychiatry, 1025 Pine Avenue West, Montreal 2, P.Q., Canada.

World Medical Association

The Secretary General of The World Medical Association announced that Dr. Ernst Fromm, treasurer of the Association, transmitted a check for $1000 to the Secretary of the Colegio Médico de Chile to be used to provide medical assistance relief to the earthquake victims in Chile. Medical associations and doctors of the world are urged to provide medical supplies and funds for the relief of these victims. Assistance should be addressed to:

Dr. Rolando Castanon
Colegio Medico de Chile
Miraflores No. 464
Santiago, Chile

U. S. Department of Health, Education, and Welfare

Food and Drug Administration

Stronger regulations to insure that physicians receive adequate information about the drugs they prescribe and to insure the safety of new drugs have been proposed by the Food and Drug Administration.

The new regulations would:

(1) Require sweeping changes in the labeling of prescription drugs. Virtually all prescription drug packages and printed matter distributed to physicians to promote sale of a drug would be required to bear complete information for professional use of the drug, including information about any hazards, side effects or necessary precautions. The only exception in the proposed regulations would apply to frequently used medicines that are commonly familiar to the doctor.

(2) Provide that when safety requires, a new drug would be kept off the market until the manufacturer's representations regarding the reliability of manufacturing methods, facilities and controls have been confirmed by a factory inspection by the Food and Drug Administration.

Other proposed labeling changes would require drugs for injection and for use in the eyes to bear a quantitative declaration of all inactive ingredients. Labels of all prescription drugs would be required to include an "identifying lot or control number from which it is possible to determine the complete manufacturing history of the drug."

Commenting on the proposed regulations, George P. Larrick, Commissioner of Food and Drugs, said:

"The large number of new medications has made it increasingly difficult for doctors and pharmacists to keep adequately informed about them. We are hopeful that the proposed regulations will improve the communication of vitally necessary informa-

tion and bring about a general improvement in drug promotion practices. At the same time, they should furnish a basis for more effective government control where necessary."

Interested persons are invited to submit written comments on the proposed regulations to the Hearing Clerk, Department of Health, Education and Welfare, Room 5440, 330 Independence Ave., S.W., Washington 25, D. C., within 60 days from the date of publication in the Federal Register.

* * *

Nursing homes throughout the Nation report a wide range in daily operating costs, according to a Public Health Service publication released recently.

The booklet, "Costs of Operating Nursing Homes and Related Facilities," cites costs from 36 studies in nursing homes, homes for the aged, and boarding homes under proprietary, nonprofit, and public auspices.

The report is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., for 20 cents a copy.

Veterans Administration

Further progress in establishing the cause and treatment of cardiac arrest (heart stoppage), a dreaded complication of surgery, had been made by doctors at the Brooklyn, New York, Veterans Administration hospital.

A major factor, the research group feels, is "potassium intoxication" induced by massive blood transfusions.

If sudden heart stoppage occurs during surgery, it is often a lethal complication even though massage of the heart is instituted shortly after the standstill occurs, according to Dr. Harry H. LeVeen of the Brooklyn VA hospital.

He and a team of research workers from this hospital and the State University of New York reported their findings in the June 18 issue of the **Journal of the American Medical Association.**

Their attention was focused on blood transfusions when they noticed that cardiac arrest occurred in several patients following massive transfusions.

* * *

A major new instrument for atomic medicine has been installed at the Veterans Administration center in Los Angeles, the VA announced recently.

Known as a human-body radiation counting system, the 25-ton steel room, with instrumentation, makes possible measurement of the amount of radiation present in the body from fallout, medical dosage, handling radioactive materials, or other sources.



Dr. William H. Blahd, chief of radioisotope service at the center, said the counter will be used in diagnosis and medical research and will be an important resource for civil defense.

Red Cross Gives Safety Hints

Don't be a vital statistic this summer or fall.

This was the Red Cross warning to the millions of Americans who will spend coming weekends taking to the water.

A. W. Cantwell, National Director of Red Cross Safety Services, gave these safety hints for Americans interested in aquatics:

1. Learn to swim.
2. Make sure someone is near to help you if you get in trouble.
3. Swim in a safe place.
4. Know the swimming area.
5. Don't go beyond safe limits or your ability.
6. Try to stay calm in case of trouble.
7. Keep safety equipment in your boat or canoe. Non-swimmers should wear life vests when riding in a small craft.
8. As a general rule stay with your boat or canoe. Most small craft will float, even when filled with water or overturned
9. Don't overload your boat.
10. Don't "overpower" your boat. A motor too powerful for your boat makes it difficult to control.

Ten Rules for Cataract Patients

Ten rules for persons who have had cataracts removed from their eyes are offered by a physician who has undergone the surgery.

James M. Mackintosh, M.D., director of education and training for the World Health Organization, Geneva, Switzerland, outlined them in **Hospitals**, Journal of the American Hospital Association.

Dr. Mackintosh's rules are:

—Leave your glasses where you can find them easily. This applies especially to the bedside at night.

—Keep a spare pair of glasses in a well-marked place known to wife, secretary, and self.

—On entering a room, survey the scene quickly to detect hidden perils like footstools, low chairs, small children lying on the floor, and other tripping hazards near the ground.

—Look around the room to see who is there or you may completely miss one of its inhabitants.

—Before getting up, make another quick survey in case someone has placed a drink on a table below your level of vision.

—When walking and you meet someone you know, turn your head rapidly from right to left to make sure that he is not accompanied.

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dermatitis (atopic, contact, eczematoid)
neurodermatitis
pruritus ani et vulvae
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—In traffic always look several times to left and right before crossing.

—Avoid occupations that require a great deal of bending, such as gardening, automobile repairs, and lifting heavy articles.

—Don't try to read too long at one time. A half-hour spell, followed by a rest of 10 minutes, is generally enough. The rest period must not be filled with other eye-straining activities such as television or sewing.

—Avoid contemplating rapidly moving objects, such as movies or swiftly moving games, if this gives a sense of strain.

Carbocaine Called Big Advance In Anesthetics

A potent new local anesthetic, described as a marked advance in its field following extensive pharmacologic and clinical studies over the past three years in the United States, Sweden, Denmark, Germany and other countries, has been made available to the medical profession in this country.

The new anesthetic agent is called Carbocaine, and is a product of Winthrop Laboratories.

It has a number of advantages as a local anesthetic, chiefly its wide usefulness, high potency, safety and suitability for use without epinephrine, the vasoconstrictor.

Carbocaine has also been found to be extremely stable, enabling solutions to be autoclaved repeatedly or stored for long periods without danger of decomposition.

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BOOK REVIEWS

A Doctor in Many Lands. By Aldo Castellani. 319 pages, plus 36 pages appendices. Price, $4.95. Garden City, New York: Doubleday and Company, 1960.

Even in the antibiotic era most physicians have heard of Castellani's mixture as a virtuous preparation for fungal dermatoses, but fewer medical men know much more about the contributions of this extremely active man. Now over 80 years old, Dr. Castellani has set down anecdotal reminiscences of a lively career on several continents. Born and educated in Italy, he had further training in Germany, then went to England, casting his fortunes with the Empire in Africa and Ceylon until the 1914-1918 war. After service with the Italian Navy, he spent some time in Poland, then resumed practice and teaching in London, Rome and New Orleans (at Tulane and Louisiana State.) During those years he had a large clinical practice in addition to his laboratory work, he attended many famous people, furnishing the background for amusing accounts about them. He was very active with the Italian military during the Ethiopian war. Still an Italian citizen, and this time on the side opposite his British friends, Castellani again returned to Italy for the 1939-1945 war, seeing service in Europe and Africa. Following the war he went into exile with the Italian royal family and now lives in Portugal.

Castellani's autobiography does not really tell a great deal about Castellani, dealing largely with his environment and his patients. As an example, he mentions his marriage, his wife, and daughter in two paragraphs early in the book, and never again. He is at some pains to make clear his contributions in the discovery of the causative role of trypanosomes in African sleeping sickness, and various other original observations, and deals briefly with the circumstances of their discovery. One is impressed with the unflagging zeal and curiosity he has brought to every task. Not satisfied with enjoying the golden beauty spots so prized by Singhalese women he took some scrapings from them and found they were fungus colonies!! Literary and poetic circles in Ceylon did not receive this news enthusiastically, he remarks.

Castellani's remarks about Italian politicians, royalty, and military men are especially interesting. To the end, Castellani is a royalist, and his praise of royalty is unbounded and unashamed. Many of the famous Italians of this century have been his patients, and from his long acquaintance he draws many pages of remarks. Mussolini appears as a dedicated and capable man in his early career, corrupted and ruined by the Germans. The Ethiopian campaign is presented as a sort of an armed cultural and economic mission, which was largely beneficial to the Ethiopians. Castellani feels that the success of the Italian campaign was in large part due to adequate medical preparation for a tropical war. He later discusses the adverse

effect of the lack of adequate medical care in the desert campaigns of the second World War. The appendices deal with "Climate and Its Influence" and "Medical Aspects of the Ethiopian Campaign."

The book is a pleasant day's reading for a summer vacation, and would make an excellent gift for anyone interested in an urbane, gossipy, and intelligent physician's account of a life well spent and still in progress.

Rudolph Matas: A Biography of One of the Great Pioneers in Surgery. By Isidore Cohn, M. D., with Hermann B. Deutsch. 431 pages. Price, $5.95. Garden City, New York: Doubleday & Company, Inc., 1960.

The subject of this biography provided a wealth of material for the author, since Rudolph Matas was not only one of the great surgeons of the world, but also a prolific writer of medical articles and one of the pioneers who crusaded to rid the world of yellow fever.

The author has taken all the skeins of Dr. Matas' life and woven them into a splendid and enchanting story, one of the threads being the history of the conquest of Bronze John. Much of the political history of New Orleans and Louisiana during the ninety-seven years that Dr. Matas lived is gathered together in this volume.

Dr. Cohn is to be congratulated on his ability to bring out the true personality of this great surgeon and man. All students of medicine and persons interested in history and the history of medicine will be delighted to read this magnificent story.

New Teaching Film Released by SK&F

"Resuscitation of the Newborn," the first in a new series of Medical Teaching Films to be produced semi-annually by Smith Kline and French Laboratories, was released to the medical profession recently.

Made under the medical direction of the Special Committee on Infant Mortality of the Medical Society of New York County, the color film illustrates essential techniques and principles for the resuscitation of infants who do not breathe, or whose breathing is impaired, at birth.

Two other educational films, produced before the two-a-year program was begun, have been incorporated into the SK&F Teaching Film Series. They are "Recognition and Management of Respiratory Acidosis," and "Human Gastric Function."

Prints of "Resuscitation of the Newborn," as with the other two films in the new series, may be obtained on free loan from Smith Kline and French Professional Service and Hospital Representatives, or directly from the Smith Kline and French Medical Film Center, Philadelphia 1, Pa.

The Month in Washington

Congress returned to work this month to take up its unfinished business, including the controversial issue of health care for the aged, in an atmosphere dominated by election-year politics.

The three or four week, tag-end session of Congress loomed as one of the most important meetings in the past decade as far as possible impact on the medical profession is concerned.

The lawmakers are slated to decide whether to embark the federal government on a course that could threaten the private practice of medicine, or to adopt a voluntary program that would pose no such danger.

The omnibus social security bill approved by the House Ways and Means Committee was easily cleared by the House, 381 to 23, and sent to the Senate Finance Committee, which held two days of hearings. The measure contained a voluntary, federal-state program for assisting needy aged persons meet their health care costs. Both the Administration and the American Medical Association endorsed the House measure as in keeping with the concept of giving the states prime responsibility for helping their citizens, for aiding those who are most in need of help, and for avoiding the compulsory aspects of health plans involving the social security mechanism.

A vote by the Finance Committee, headed by Senator Harry F. Byrd, (D., Va.) was scheduled shortly after the Senate resumed operations in August. Whatever action the Committee took, however, proponents of schemes such as the Forand bill to provide a compulsory, federal medical program promised a determined fight on the floor of the Senate.

In the event Congress should approve a government medicine plan, opponents were counting on a Presidential veto to kill the measure. The Chief Executive repeatedly has asserted in strong language his all-out opposition to any compulsory plan for health care financing.

At the Senate Finance Committee hearing, Arthur S. Flemming, Secretary of Health, Education and Welfare, renewed the Administration's flat stand against the social security avenue to financing health

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From the Washington Office of the American Medical Association.

costs. Such a plan, he said, would inevitably lead to pressures for expanding the benefits and lowering or eliminating the age requirement. Under such circumstances, a 15 per cent or 20 per cent social security payroll tax would not be too far off, he said. "We believe it is unsound to assume that revenue possibilities from a payroll tax are limitless."

Dr. Leonard W. Larson, president-elect of the American Medical Association, told the Committee the House bill is the "antithesis of the centralized, socialized, statist approach of the proposals advocating national compulsory health insurance."

A spokesman for the insurance industry pointed out "giant strides" made by private health insurance in recent years in covering aged persons. E. J. Faulkner declared that one of the most prevalent and erroneous assumptions on the matter is that most of the aged aren't able to contribute to financing their own health care costs.

The Social Security health bills, he said, "would impair or destroy the private practice of medicine, would add immeasurably to our already crushing tax burden, would aggravate our severe public fiscal problems, and would entail other undesirable consequences."

In other testimony, the AFL-CIO again urged enactment of a Social Security health bill; the American Optometric Association and the International Chiropractors Association urged that health benefits included in any bill include the services of osteopaths and chiropractors, respectively.

On another legislative proposal of interest to the medical profession — the Keogh-Simpson bill—a Senate debate was scheduled this month. Senator Gordon Allott (R., Colo.) said in a Senate speech that "I believe that this legislation will have the overwhelming support of this body."

The bill, which would encourage retirement savings by the self-employed such as lawyers, small businessmen and physicians has already been approved by the House. The Senate bill, voted by the Senate Finance Committee, would require participating self-employed to establish retirement plans for their employees.

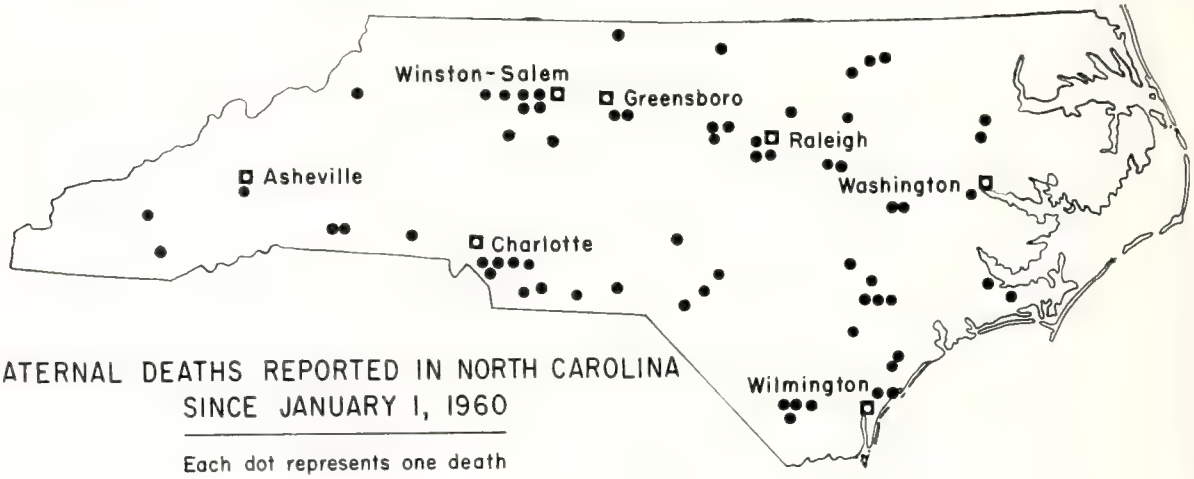
In Memoriam

Robert A. Matheson, M.D.

Dr. Robert A. Matheson was born in Hoke County on January 12, 1898. He died at his home in Raeford, on April 24, 1960.

He was graduated from the University of North Carolina. After studying medicine there for two years he enrolled at Jefferson Medical College where he was graduated in 1926. He served his internship in Atlantic City, New Jersey, and was chief resident physician there for one year. He served in France during World War I and later was a major in the North Carolina National Guard. He was a member of the Raeford Methodist Church, the Raeford Kiwanis Club, and was a Shriner.

He was a member of the Hoke County Medical Society, the Medical Society of the State of North Carolina, and the Southern Medical Association. He practiced medicine in Raeford from 1928 until his death. He was a family doctor in every sense of the word. He not only was friend, counselor and guide to his many patients, but was also highly esteemed by all his colleagues.



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Each dot represents one death

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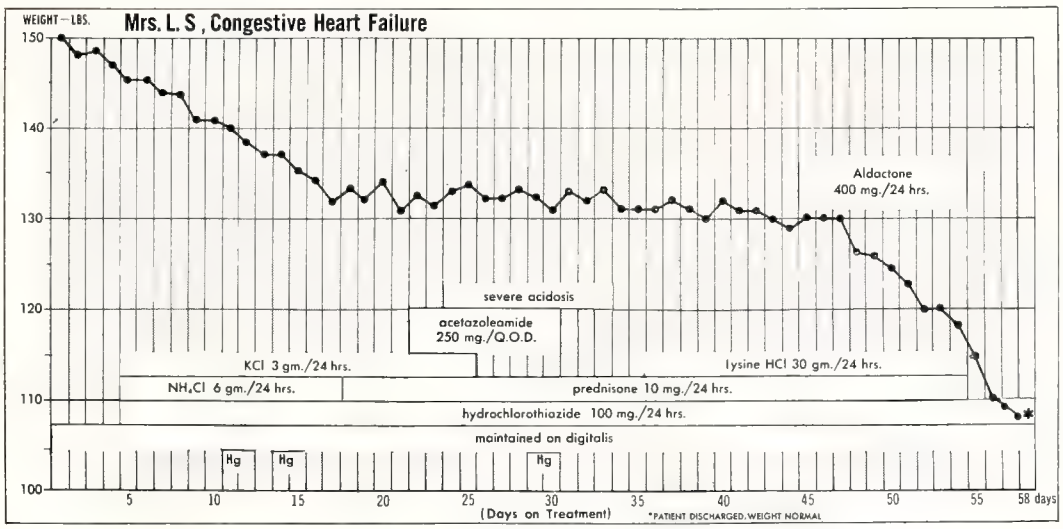
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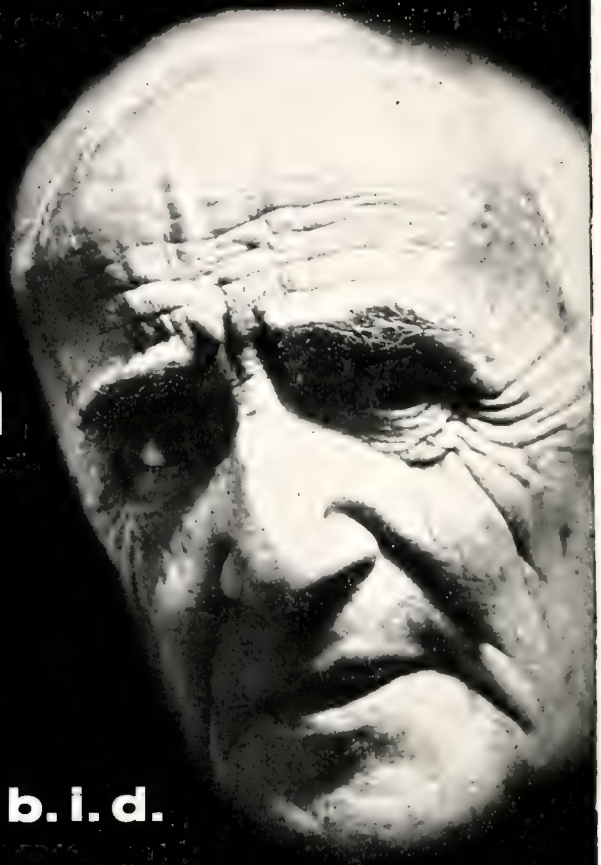
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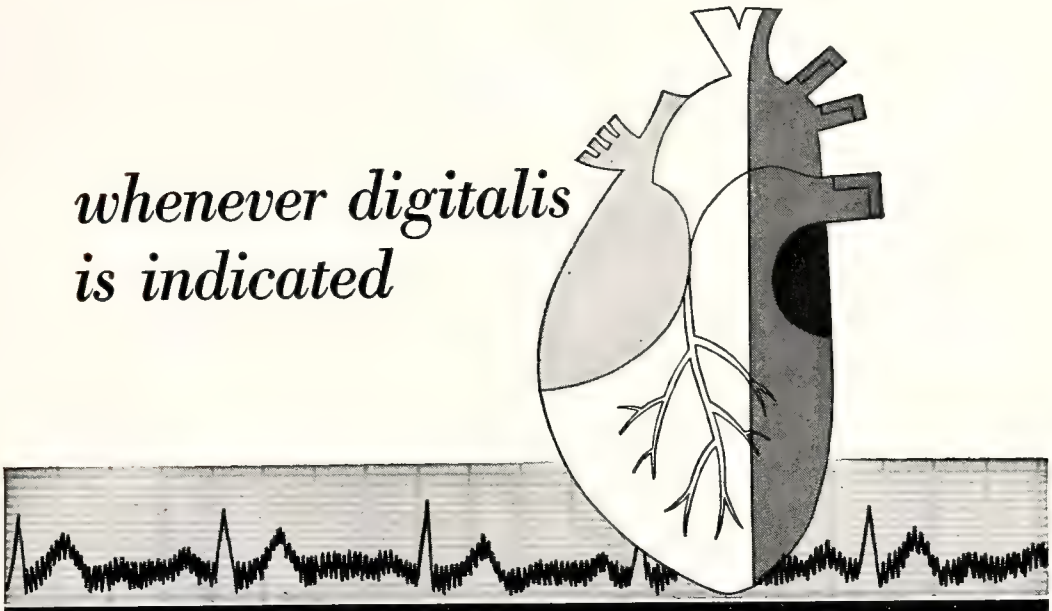


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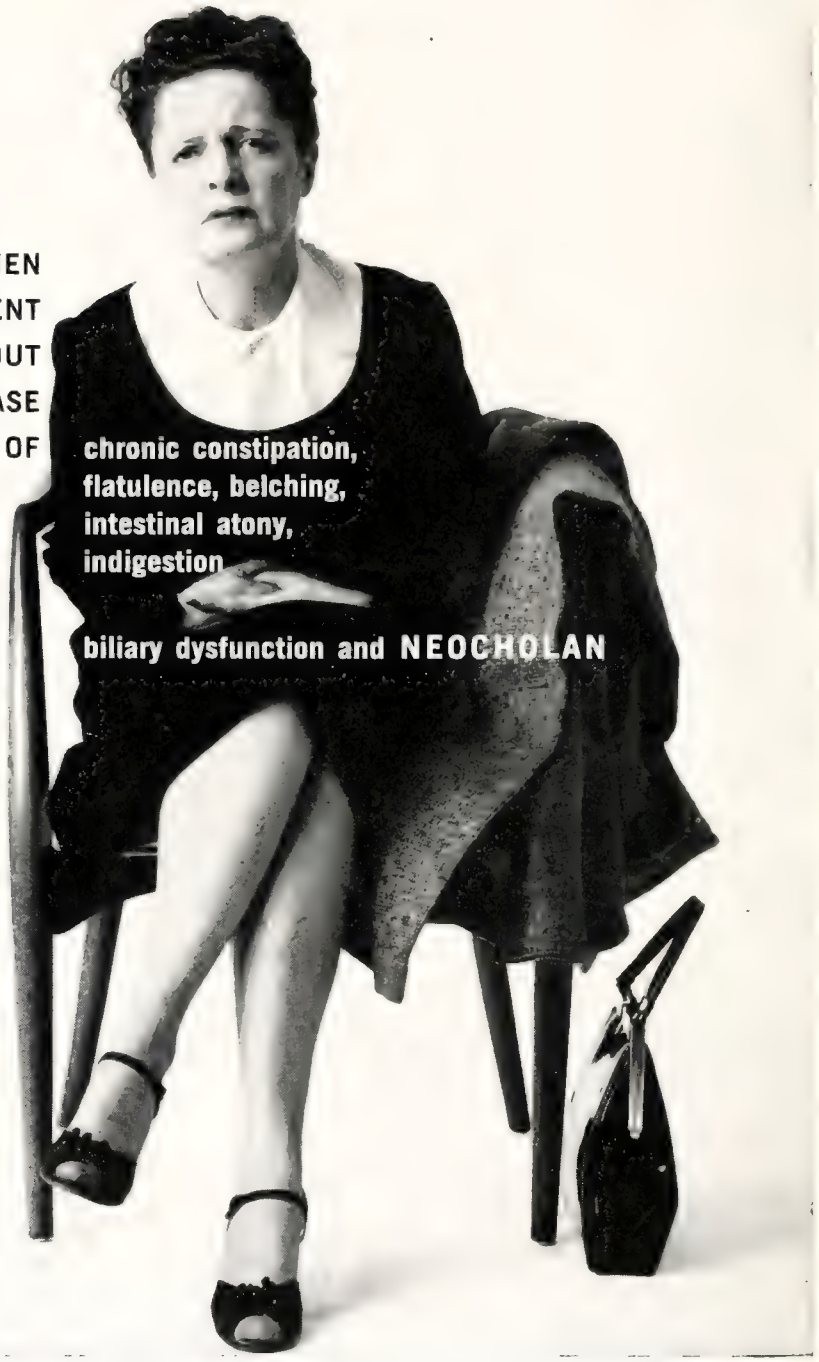
Lown, B., and Levine, S. A.: Current Concepts in Digitalis Therapy, Boston, Little, Brown & Company, 1954, p. 23, par. 2.

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Dosage

ADULTS: Initially 1 or 2 tablespoons from four to six times daily, or 1 or 2 teaspoons after each loose bowel movement; reduce dosage as diarrhea subsides.

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HOW SUPPLIED: Bottles of 16 fl. oz.

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Available on prescription only.

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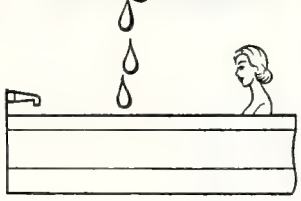
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1. Spoor, H. J.: N. Y. State J. Med., Oct. 15, 1958

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Diagnostic Quandaries

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Rheumatoid Arthritis? Regional Enteritis?

A DISEASE that is frequently overlooked in solving diagnostic quandaries is amebiasis. Its symptoms are varied and contradictory, and diagnosis is extremely difficult. In one study, 56% of the cases would have been overlooked if the routine three stool specimens had been relied on.[1]

Another study found 96% of a group of 150 patients with rheumatoid arthritis were infected by *E. histolytica*. In 15 of these subjects, nine stool specimens were required to establish the diagnosis.[2]

Webster discovered amebic infection in 147 cases with prior diagnoses of spastic colon, psychoneurosis, gall bladder disease, nervous indigestion, chronic appendicitis, and other diseases. Duration of symptoms varied from one week to over 30 years. In some cases, it took as many as six stool specimens to establish the diagnosis of amebiasis.[3]

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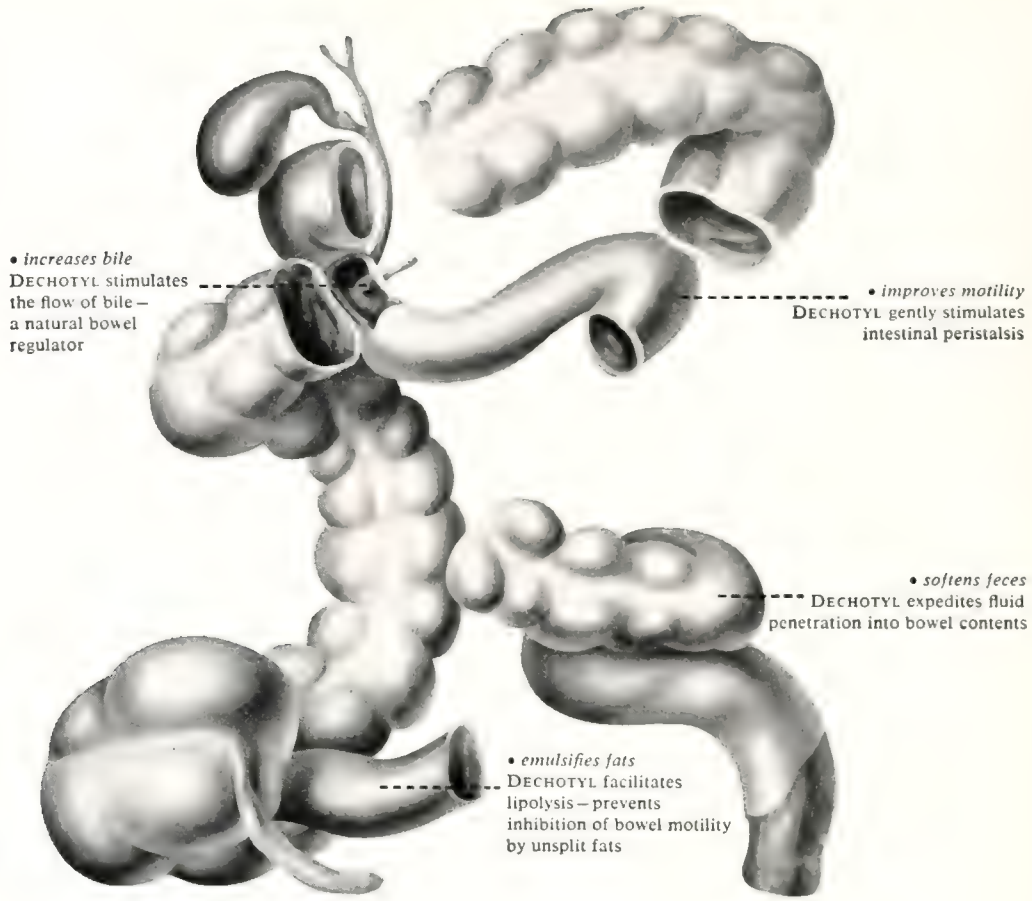
1. Cook, J.E., Briggs, G.W., and Hindley, F.W.: Chronic Amebiasis and the Need for a Diagnostic Profile, Am. Pract and Dig of Treat. *6*:1821 (Dec , 1955).

2. Rinehart, R.E , and Marcus, H : Incidence of Amebiasis in Healthy Individuals, Clinic Patients and Those with Rheumatoid Arthritis, Northwest Med , *54*:708 (July, 1955).

3. Webster, B.H.: Amebiasis, a Disease of Multiple Manifestations, Am. Pract. and Dig. of Treat. *9*:897 (June, 1958).

*U.S. Pat. No. 2,864,745

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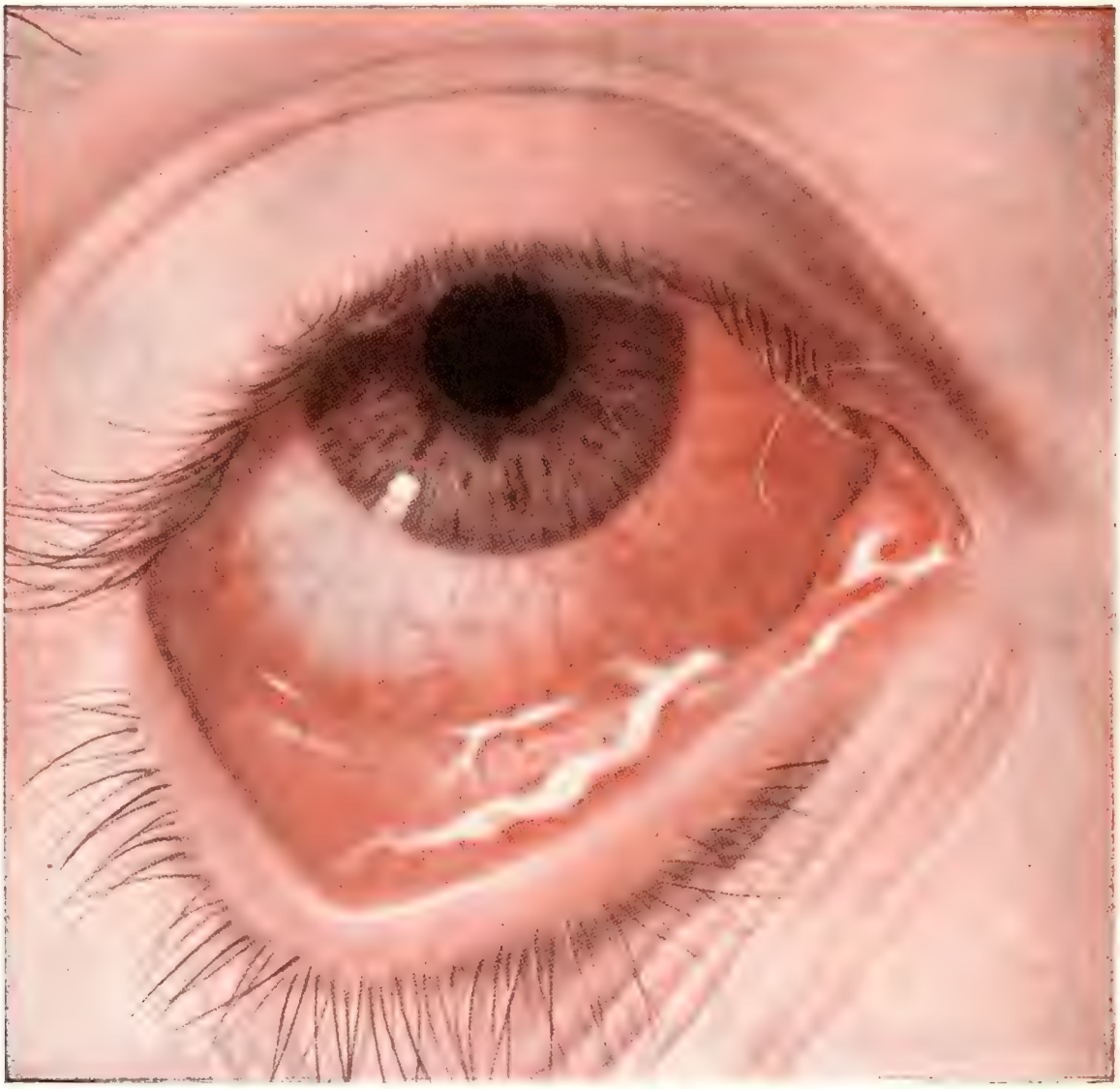
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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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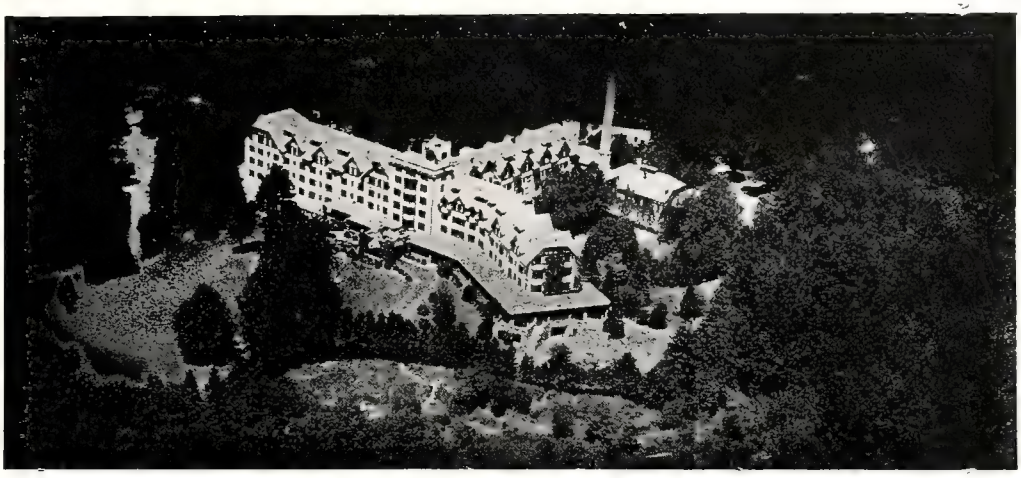
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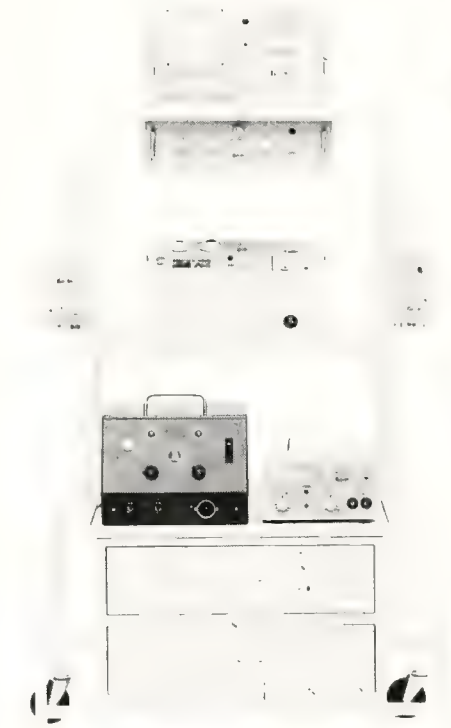
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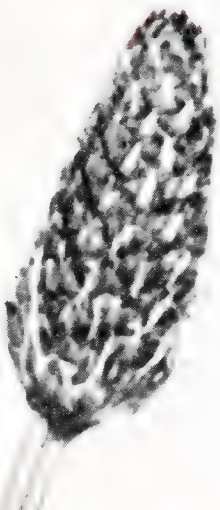
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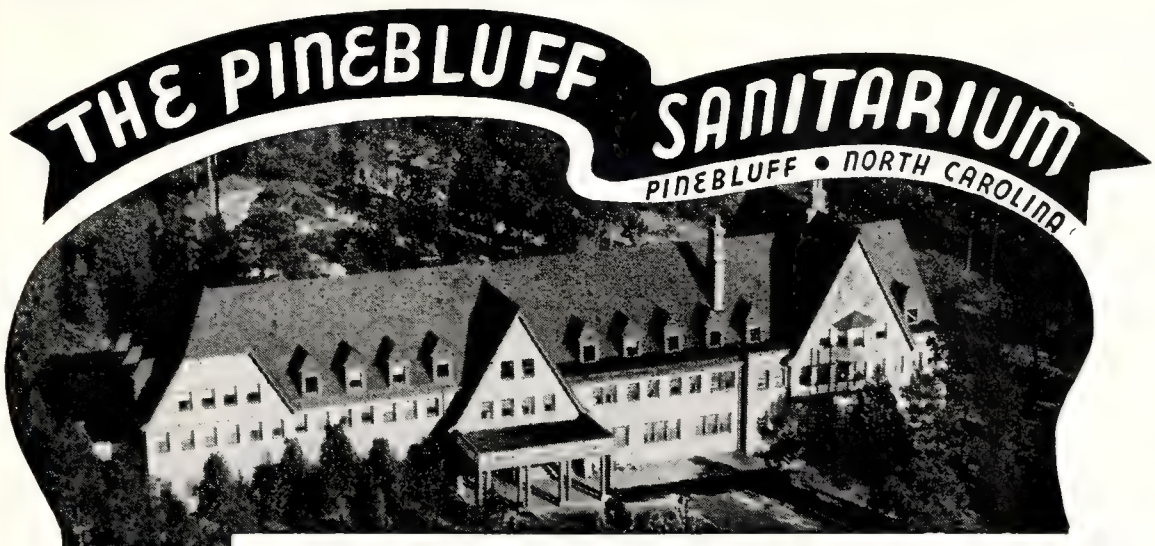
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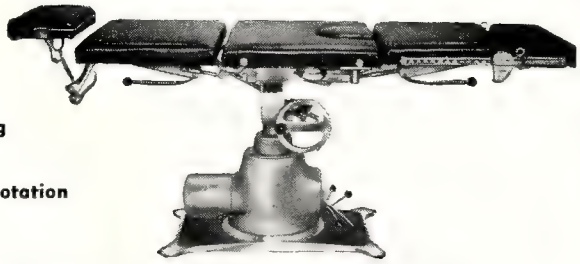
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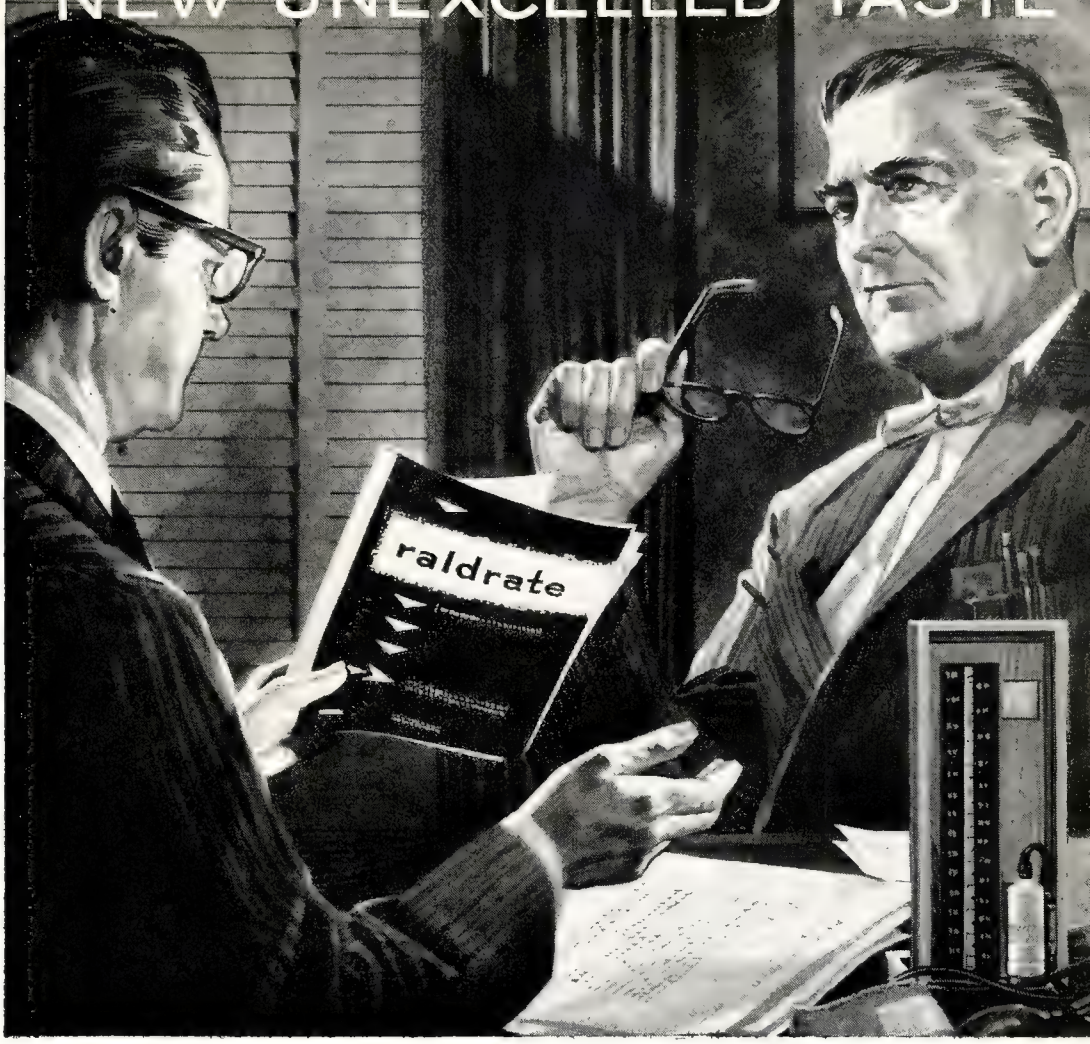
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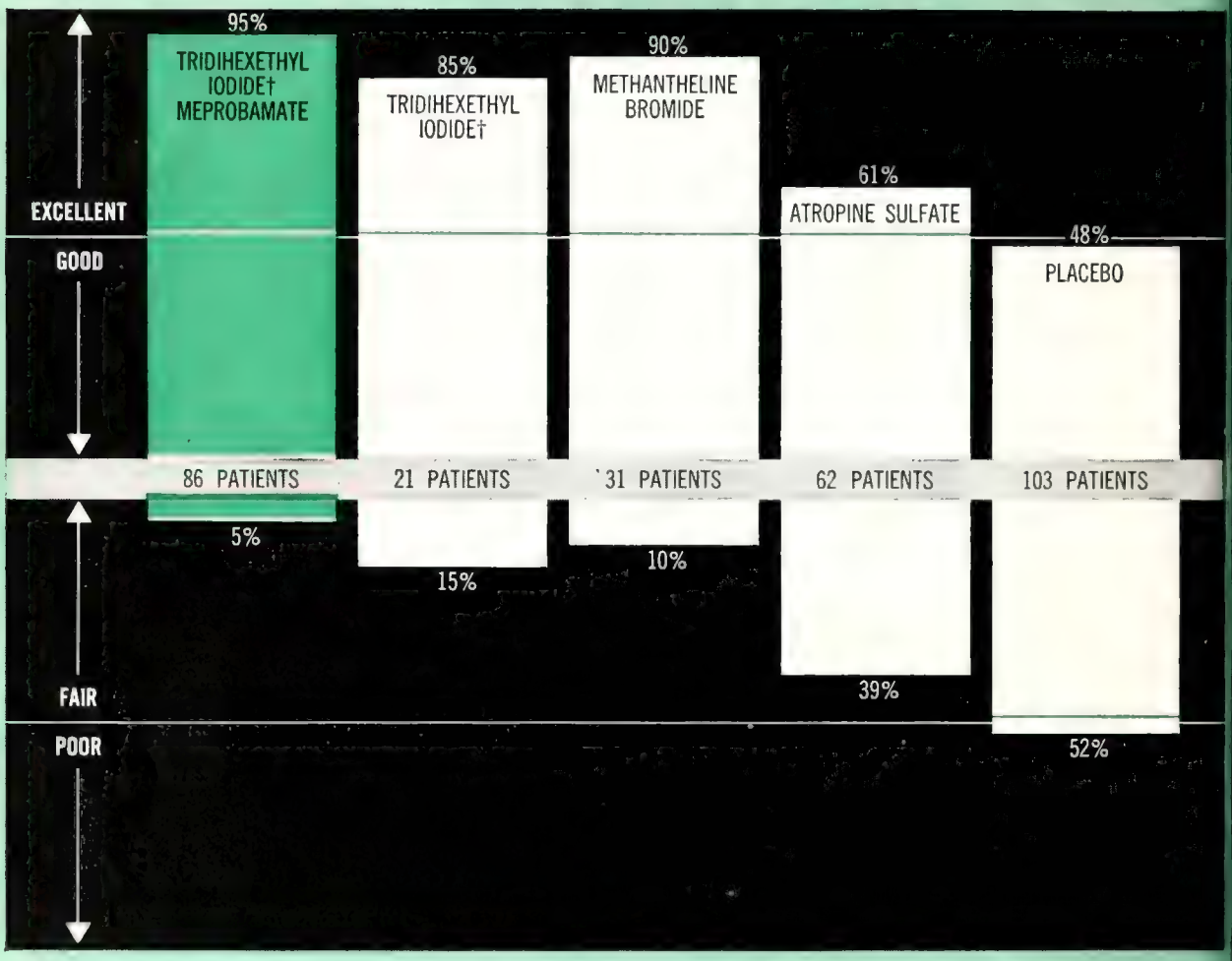
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PATHIBAMATE-400 Tablets: 400 mg. of meprobamate; 25 mg. of PATHILON

Dosage: Average oral adult dose is 1 tablet t.i.d. at mealtime and 2 tablets at bedtime.

Pathibamate® 400 200

meprobamate with PATHILON® tridihexethyl chloride Lederle

clinically proven safety

The efficacy of **PATHIBAMATE** has been confirmed clinically in **duodenal ulcer, gastric ulcer, intestinal colic, spastic and irritable colon, ileitis, esophageal spasm, anxiety neurosis** with gastrointestinal symptoms, and **gastric hypermotility.**

Pictured are the results obtained with the PATHILON (tridihexethyl iodide)–meprobamate combination† in a double-blind study of 303 ulcer patients, extending over a period of 36 months.* They clearly demonstrate the efficacy of **PATHIBAMATE** in controlling the symptoms.

SIDE EFFECTS	TRIDIHEXETHYL IODIDE† MEPROBAMATE	TRIDIHEXETHYL IODIDE†	METHANTHELINE BROMIDE	ATROPINE SULFATE	PLACEBO
DRY MOUTH	1%	5%	72%	46%	5%
STOMATITIS	1%	0%	28%	14%	0%
VISUAL DISTURBANCES	0%	0%	50%	34%	1%
URINARY RETENTION	0%	0%	18%	11%	1%
DROWSINESS	20%	0%	0%	0%	0%
COMPLICATIONS OR SURGERY					
HEMORRHAGE	0%	9%	3%	9%	10%
PERFORATION	0%	0%	0%	6%	0%
OPERATION	0%	5%	5%	14%	2%
RECURRENCES					
NONE	28%	23%	25%	17%	26%
FEWER AND MILDER	67%	62%	52%	37%	24%
SAME OR MORE	5%	15%	23%	46%	50%

*Atwater, J. S., and Carson, J. M.: Therapeutic Principles in Management of Peptic Ulcer. **Am. J. Digest. Dis.** 4:1055 (Dec.) 1959.

†PATHILON is now supplied as tridihexethyl chloride instead of the iodide, an advantage permitting wider use, since the latter could distort the results of certain thyroid function tests.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

control the tension — treat the trauma


alert tranquillity

a new, improved, more potent relaxant for anxiety and tension

- effective in half the dosage required with meprobamate
- much less drowsiness than with meprobamate, phenothiazines, or the psychosedatives
- does not impair intellect, skilled performance, or normal behavior
- neither depression nor significant toxicity has been reported



alert tranquillity

Striatran®

EMYLCAMATE

- a familiar spectrum of antianxiety and muscle-relaxant activity
- no new or unusual effects—such as ataxia or excessive weight gain
- may be used in full therapeutic dosage even in geriatric or debilitated patients
- no cumulative effect
- simple, uncomplicated dosage, providing a wide margin of safety for office use

STRIATRAN is indicated in anxiety and tension, occurring alone or in association with a variety of clinical conditions.

Adult Dosage: One tablet three times daily, preferably just before meals. In insomnia due to emotional tension, an additional tablet at bedtime usually affords sufficient relaxation to permit natural sleep.

Supply: 200 mg. tablets, coated pink, bottles of 100.

While no absolute contraindications have been found for Striatran in full recommended dosage, the usual precautions and observations for new drugs are advised.

For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.

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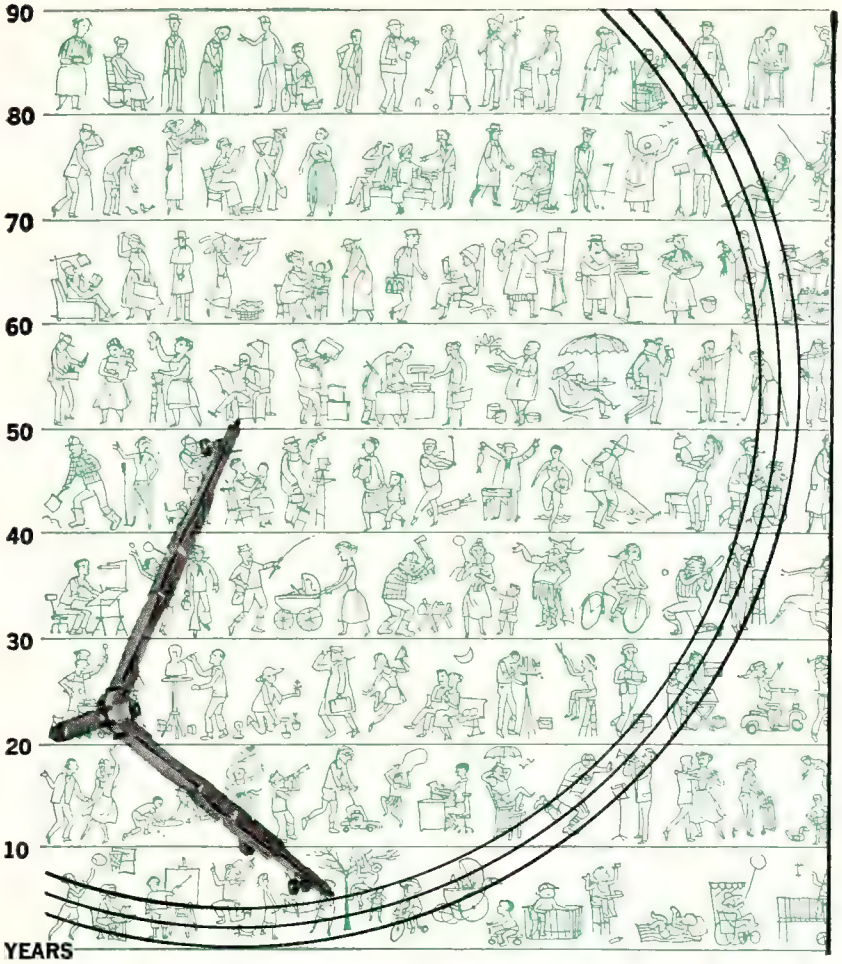
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senile anxiety
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1. simple dosage schedule produces rapid, reliable tranquilization without unpredictable excitation
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meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.
Supplied: 400 mg. scored tablets, 200 mg. sugar coated tablets.
Also as MILPROTABS* – 400 mg. *unmarked*, coated tablets; and as MILPROSPAN® – 400 mg. and 200 mg. *continuous release* capsules.

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of clinical use...



...for the tense and nervous patient

Despite the introduction in recent years of "new and different" tranquilizers, Miltown continues, quietly and steadfastly, to gain in acceptance. Meprobamate (Miltown) is prescribed by the medical profession more than any other tranquilizer in the world.

The reasons are not hard to find. Miltown is a ***known*** drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.***

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"Gratifying" relief from

for your patients with
'low back syndrome' and
other musculoskeletal disorders

POTENT muscle relaxation

EFFECTIVE pain relief

SAFE for prolonged use

stiffness and pain

"gratifying" *relief from stiffness and pain in 106-patient controlled study (as reported in J.A.M.A., April 30, 1960)*

"Particularly gratifying was the drug's [SOMA's] ability to relax muscular spasm, relieve pain, and restore normal movement . . . Its prompt action, ability to provide objective and subjective assistance, and freedom from undesirable effects recommend it for use as a muscle relaxant and analgesic drug of great benefit in the conservative management of the 'low back syndrome'."

Kestler, O.: Conservative Management of "Low Back Syndrome", J.A.M.A. 172: 2039 (April 30) 1960.

FASTER IMPROVEMENT—79% complete or marked improvement in 7 days (Kestler)

EASY TO USE—Usual adult dose is one 350 mg. tablet three times daily and at bedtime.

SUPPLIED: 350 mg., white tablets, bottles of 50.
For pediatric use, 250 mg., orange capsules, bottles of 50.

Literature and samples on request.

SOMA®

(CARISOPRODOL, WALLACE)

WALLACE LABORATORIES, CRANBURY, NEW JERSEY

now–for more comprehensive control of *'pain & spasm'*



INDICATIONS

HEAD: temporomandibular muscle spasm • NECK: acute torticollis, osteoarthritis of cervical spine with spasm of cervical muscles, whiplash injury • TRUNK AND CHEST: costochondritis, intercostal myositis, xiphodynia • BACK: acute and chronic lumbar strains and sprains, acute low back pain (unspecified), acute lumbar arthritis and traumatic injury, compression fracture, herniated intervertebral disc, post-disc syndrome, strained muscle(s) • EXTREMITIES: acute hip injury with muscle spasm, ankle sprain, arthritis (as of foot or knee), blow to shin followed by muscle spasm, bursitis, spasm or strain of muscle or muscle group, old fracture with recurrent spasm, Pellegrini-Stieda disease, tenosynovitis with associated pain and spasm.

-pain due to or associated with -spasm of skeletal muscle

a new muscle relaxant-analgesic

Robaxisal®

ROBAXIN® WITH ASPIRIN

Many conditions, painful in themselves, often give rise to spasm of skeletal muscles. ROBAXISAL, the new dual-acting muscle relaxant-analgesic, treats both the pain and the spasm with marked success: In clinical studies on 311 patients, 12 investigators[1] reported satisfactory results in 86.5%. Each ROBAXISAL Tablet contains:

- A relaxant component — Robaxin* — widely recognized for its prompt, long-lasting relief of painful skeletal muscle spasm, with unusual freedom from undesired side effects. . . . . 400 mg.

  *Methocarbamol Robins. U.S. Pat. No. 2770649.

- An analgesic component—aspirin—whose pain-relieving effect is markedly enhanced by Robaxin, and which has added value as an anti-inflammatory and anti-rheumatic agent. . . . (5 gr.) 325 mg.

INDICATIONS: ROBAXISAL is indicated when analgesic as well as relaxant action is desired in the treatment of skeletal muscle spasm and severe concurrent pain. Typical conditions are disorders of the back, whiplash and other traumatic injuries, myositis, and pain and spasm associated with arthritis.

SUPPLY: ROBAXISAL Tablets (pink-and-white, laminated) in bottles of 100 and 500.

Also available: ROBAXIN Injectable, 1.0 Gm. in 10-cc. ampul. ROBAXIN Tablets, 0.5 Gm. (white, scored) in bottles of 50 and 500.

[1]Clinical reports in files of A. H. Robins Co., Inc., from: J. Allen, Madison, Wisc., B. Billow, New York, N. Y., B. Decker, Richmond, Va., C. Freeman, Jr., Augusta, Ga., R. B. Gordon, New York, N. Y., J. E. Holmblad, Schenectady, N. Y., L. Levy, New York, N. Y., N. LoBue, Chicago Heights, Ill., H. Nachman, Richmond, Va., A. Poindexter, Los Angeles, Cal., E. Rogers, Brooklyn, N. Y., K. H. Strong, Fairfield, Ia.

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Q. *When you want to reduce serum cholesterol and maintain it at a low level, is medication more realistic than dietary modifications?*

A. *Maintenance of lowered cholesterol concentration in the blood is a life-long problem. It is usually preferable, therefore, to try to obtain the desired results through simple dietary modification. This spares the patient added expense and permits him meals he will relish.*



The modification is based on a diet to maintain optimum weight plus a judicious substitution of the poly-unsaturated oils for the saturated fats. One very simple part of the change is to cook the selected foods with poly-unsaturated Wesson. In the prescribed diet, this switch in type of fat will help to lower blood serum cholesterol and help maintain it at low levels. The use of Wesson permits a diet planned around many favorite and popular foods. Thus the patient finds it a pleasant, easy matter to adhere to the prescribed course.

Where a vegetable (salad) oil is medically recommended for a cholesterol depressant regimen, Wesson is unsurpassed by any readily available brand.

Uniformity you can depend on. Wesson has a poly-unsaturated content better than 50% . Only the lightest cottonseed oils of highest iodine number are selected for Wesson. No significant variations are permitted in the 22 exacting specifications required before bottling.

Wesson satisfies the most exacting appetites. To be effective, a diet must be *eaten* by the patient. The majority of housewives prefer Wesson particularly by the criteria of odor, flavor (blandness) and lightness of color. (Substantiated by sales leadership for 59 years and reconfirmed by recent tests against the next leading brand with brand identification removed, among a national probability sample.)

Chicken, grilled with homemade Wesson barbecue sauce, is low in saturated fat—and delicious eating. It gives longer lasting satisfaction.



FREE *Wesson recipes, available in quantity for your patients, show how to prepare meats, seafoods, vegetables, salads and desserts with poly-unsaturated vegetable oil. Request quantity needed from The Wesson People, Dept. N., 210 Baronne St., New Orleans 12, La.*

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Wesson is 100% cottonseed oil . . . winterized and of selected quality

Linoleic acid glycerides (poly-unsaturated)	50-55%
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Total unsaturated	70-75%
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Total tocopherols	0.09-0.12%

Never hydrogenated—completely salt free



WHEN ULCEROGENIC FACTORS KEEP ON WORKING...



REMEMBER THIS: SO DOES ENARAX

Think of your patient with peptic ulcer—or with gastrointestinal dysfunction—on a typical day.

Think of the anxieties, the tensions.

Think, too, of the night: the state of his stomach emptied of food.

Disturbing?

Then think of ENARAX. For ENARAX was formulated to help you control precisely this clinical picture. ENARAX provides oxyphencyclimine, the inherently long-acting anticholinergic (up to 9 hours of actual achlorhydria[1]) . . . plus Atarax, the tranquilizer that doesn't stimulate gastric secretion.

Thus, with b.i.d. dosage, you provide continuous antisecretory/antispasmodic action **and** safely alleviate anxiety . . . with these results: ENARAX has been proved effective in 92% of G.I. patients.[2-4]

When ulcerogenic factors seem to work against you, let ENARAX work for you.

ENARAX® B.I.D.

(10 MG. OXYPHENCYCLIMINE PLUS 25 MG. ATARAX®†) A SENTRY FOR THE G.I. TRACT

dosage: Begin with one-half tablet b.i.d.—preferably in the morning and before retiring. Increase dosage to one tablet b.i.d. if necessary, and adjust maintenance dose according to therapeutic response. Use with caution in patients with prostatic hypertrophy and only with ophthalmological supervision in glaucoma.

supplied: In bottles of 60 black-and-white scored tablets. Prescription only.

References: 1. Steigmann, F., **et al.:** Am. J. Gastroenterol. **33**:109 (Jan.) 1960. 2. Hock, C. W.: to be published. 3. Leming, B. H., Jr.: Clin. Med. **6**:423 (Mar.) 1959. 4. Data in Roerig Medical Department Files.

†brand of hydroxyzine

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WHERE OCCULT BLEEDING IS PRESENT
HEPTUNA® PLUS
THE COMPLETE ANEMIA THERAPY

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Science for the World's Well-Being™

to more completely control the symptoms of the common cold

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your patients suffering from colds, respiratory disorders and allergic states, you will CONTRAMAL-CP an orally effective DECONGESTANT, ANALGESIC, ANTIPYRE- and ANTIHISTAMINIC. The inclusion of Tristamine* and Phenylephrine Hydrochlo- with the basic CONTRAMAL formula is designed to provide . . . MORE complete rol of the common cold!

**Tristamine...(triple-Antihistamines) by Physicians Products Company contains Chlorpheniramine Maleate 1.25 mg., Phenyltoloxamine Citrate 6.25 mg., and Pyrilamine Maleate 12.5 mg.*

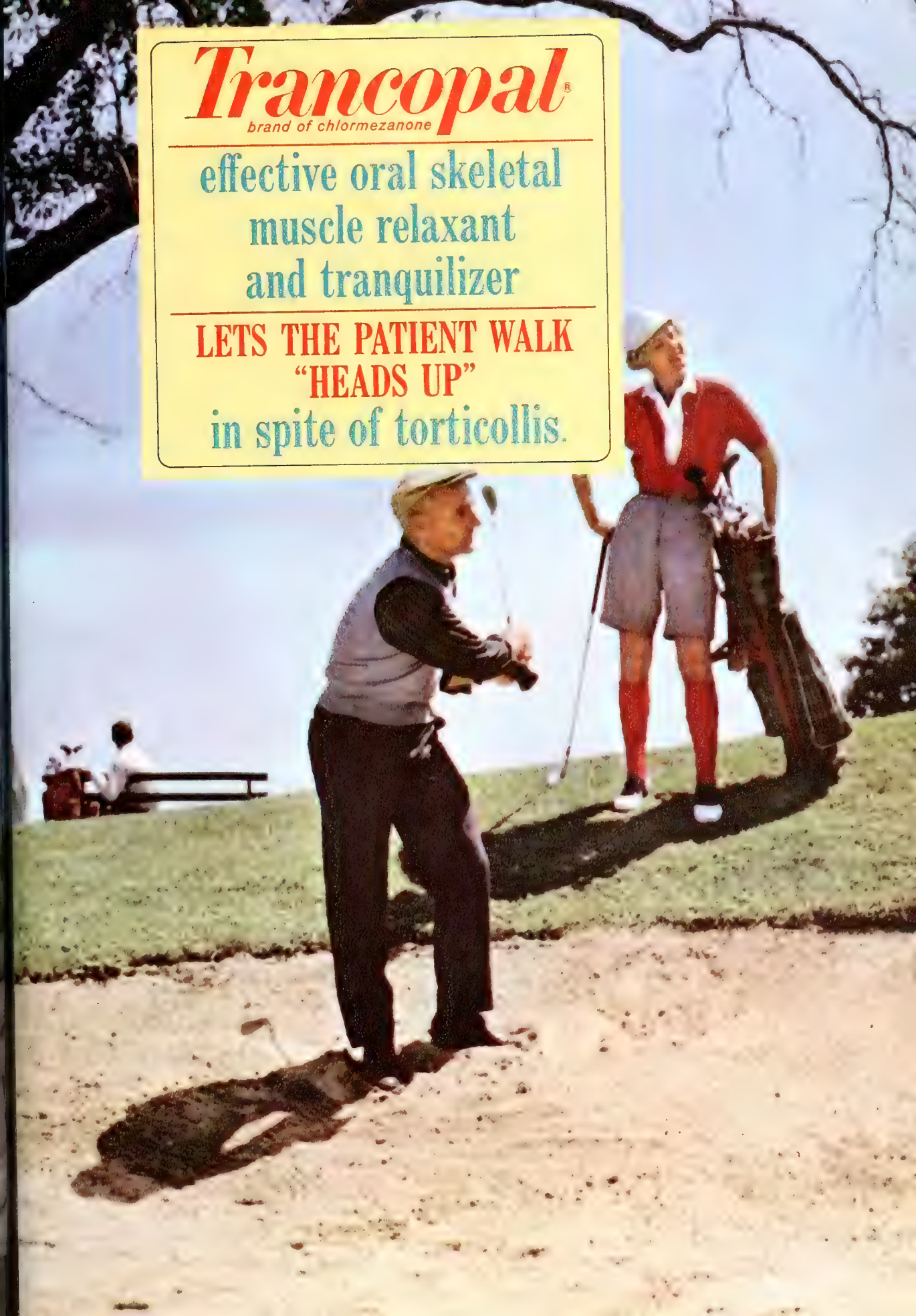
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Acetyl-p-aminophenol	325 mg.
Salicylamide	225 mg.
Caffeine	30 mg.
Phenylephrine Hydrochloride	5 mg.
Tristamine*	20 mg.

Supplied—bottles 100 and 1000 capsules



PHYSICIANS PRODUCTS CO., INC.
PETERSBURG, VIRGINIA


Trancopal®
brand of chlormezanone
effective oral skeletal
muscle relaxant
and tranquilizer
LETS THE PATIENT WALK
"HEADS UP"
in spite of torticollis.



Trancopal

relieves pain and spasm associated with torticollis.

In a recent study by Ganz, Trancopal brought considerable improvement or very effective relief to 20 of 29 patients with torticollis.[1] "The patients helped by the drug," states Ganz, "were able to carry the head in the normal position without pain." Similarly, Kearney found that in 8 of 13 patients with chronic torticollis treated with Trancopal improvement was excellent to good. ". . . Trancopal is the most effective oral skeletal muscle relaxant and mild tranquilizer currently available."[2]

Lichtman, in a study of patients with various musculoskeletal conditions, noted that 64 of 70 patients with torticollis obtained excellent to good relief with Trancopal.[3]

In a comparative study of four central nervous system relaxants, Lichtman reports that 26 of 40 patients found Trancopal to be the most effective drug.[3]

1. Ganz, S. E.: *J. Indiana M*
52:1134, July, 1959. 2. Kearney, F
Current Therap. Res. 2:127, *A*
1960. 3. Lichtman, A. L.: *Ken*
Acad. Gen. Pract. J. 4:28, Oct.,

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Clinical results with Trancopal®[2]

	Excellent	Good	Fair	Poor	Total
LOW BACK SYNDROMES					
Acute low back strain	25	19	8	6	58
Chronic low back strain	11	5	1	1	18
"Porters' syndrome"*	21	5	1	1	28
Pelvic fractures	2	1	—	—	3
NECK SYNDROMES					
Whiplash injuries	12	6	2	1	21
Torticollis, chronic	6	2	3	2	13
OTHER MUSCLE SPASM					
Spasm related to trauma	15	6	1	—	22
Rheumatoid arthritis	—	18	2	1	21
Bursitis	2	6	1	—	9
TENSION STATES	18	2	4	3	27
TOTALS	112 (51%)	70 (32%)	23 (10%)	15 (7%)	220 (100%)

*Over-reaching in lifting heavy bags resulting in sprain of upper, middle, and lower back muscles.

Dosage: **Adults, 200 or 100 mg. orally three or four times daily.**
Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

How Supplied: Trancopal Caplets®
200 mg. (green colored, scored), bottles of 100.
100 mg. (peach colored, scored), bottles of 100.

Winthrop LABORATORIES, New York 18, N. Y.

"...extraordinarily effective diuretic..."[1]

Efficacy and expanding clinical use are making Naturetin the "diuretic of choice"[2] in edema and hypertension. It maintains a favorable urinary sodium-potassium excretion ratio, retains a balanced electrolyte pattern, and causes a relatively small increase in the urinary pH.[3] More potent than other diuretics, Naturetin usually provides 18-hour diuretic action with just a single 5 mg. tablet per day — economical, once-a-day dosage for the patient. Naturetin ₹ K — for added protection in those special conditions predisposing to hypokalemia and for patients on long-term therapy.

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References. 1. David, N. A.; Porter, G. A., and Gray, R. H.: Monographs on Therapy 5:60 (Feb.) 1960. 2. Friend, D. H.; Clin. Pharm. & Therap. 1:5 (Mar.-Apr.) 1960. 3. Ford, R. V.: Current Therap. Res. 2:92 (Mar.) 1960.

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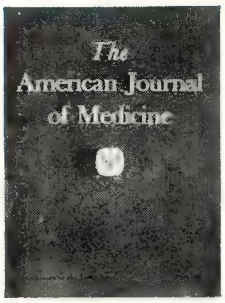
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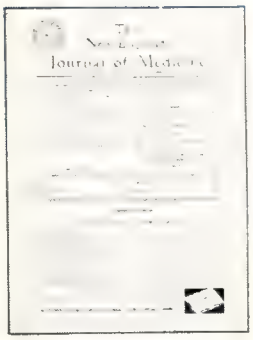
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AGAINST

MOUNTING EVIDENCE









Individually, folic acid and B_{12} fill important clinical roles.[1] But, increasing evidence indicates that multivitamins containing folic acid may obscure the diagnosis of pernicious anemia.[2-7] And vitamin B_{12}, in indiscriminate and unnecessary usage[5-8] is likewise blamed for this diagnostic confusion.[7]

Both folic acid and B_{12} have been omitted from Adabee, in recognition of this growing medical concern. Also excluded are other factors which might interfere with concurrent therapy, such as, hormones, enzymes, amino acids, and yeast derivatives. Adabee supplies massive doses of therapeutically practical vitamins for use in both specific and supportive schedules in illness and stress situations. Thus, new Adabee offers the therapeutic advantage of sustained maximum multivitamin support without the threat of symptom-masking.

references: 1. Wintrobe, M. M., *Clinical Hematology*, 3rd ed., Phila., Lea & Febiger, 1952, p. 398. 2. Goodman, L. S. and Gilman, A., *The Pharmacological Basis of Therapeutics*, 2nd. ed., New York, Macmillan, 1955, p. 1709. 3. New Eng. J.M., Vol. 259, No. 25, Dec. 18, 1958, p. 1231. 4. Frohlich, E. D., New Eng. J.M., 259:1221, 1958. 5. J.A.M.A., 169:41, 1959. 6. J.A.M.A., 173:240, 1960. 7. Goldsmith, G. A., American J. of M., 25:680, 1958. 8. Darby, W. J., American J. of M., 25:726, 1958.

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Each yellow, capsule-shaped tablet contains:

Vitamin A	25,000 USP units
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Thiamine mononitrate (B_1)	15 mg.
Riboflavin (B_2)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Nicotinamide (niacinamide)	50 mg.
Calcium pantothenate	10 mg.
Ascorbic acid (vitamin C)	250 mg.

ADABEE® M

Each green, capsule-shaped tablet contains Adabee plus nine essential minerals:

Iron	15.0 mg.	Zinc	1.5 mg.
Iodine	0.15 mg.	Potassium	5.0 mg.
Copper	1.0 mg.	Calcium	103.0 mg.
Manganese	1.0 mg.	Phosphorus	80.0 mg.
Magnesium	6.0 mg.		

indications: As dietary supplements for the deficiency states that accompany pregnancy and lactation, surgery, burns, trauma, alcohol ingestion, hyperthyroidism, infections, cardiac disease, polyuria, anorexia, cirrhosis, arthritis, colitis, diabetes mellitus, and degenerative diseases. Also in restricted diets, particularly peptic ulcer, in geriatrics, and in concurrent administration with diuretics and antibiotics.

dosage: One or more tablets a day, as indicated, preferably with meals.

new! ADABEE®

the multivitamin without B_{12} or folic acid

A. H. ROBINS COMPANY, INC.

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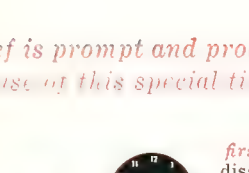
"I wouldn't be hooting all night if I were able to get my beak on some TRIAMINIC® to clear up my stuffed sinuses."

...and for humans with STUFFED-UP SINUSES...

Your patient with sinus congestion doesn't give a hoot about anything but prompt relief. And TRIAMINIC has a pharmacologically balanced formula designed to give him just that. As soon as he swallows the tablet, the medication is transported *systemically* to *all* nasal and paranasal membranes – reaching inaccessible sinus cavities where drops and sprays can never penetrate. TRIAMINIC thereby brings more complete, more effective relief without hazards of topical therapy, such as ciliary inhibition, rebound congestion, and "nose drop addiction."

Indications: nasal and paranasal congestion, sinusitis, postnasal drip, upper respiratory allergy.

Relief is prompt and prolonged because of this special timed-release action:



first—the outer layer dissolves within minutes to produce 3 to 4 hours of relief

then—the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:

Phenylpropanolamine HCl	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

Each timed-release Triaminic Juvelet® provides:
½ the formulation of the Triaminic Tablet.
Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides:
¼ the formulation of the Triaminic Tablet.
Dosage (to be administered every 3 or 4 hours):
Adults—1 or 2 tsp.; *Children 6 to 12*—1 tsp.;
Children 1 to 6 – ½ tsp.; *Children under 1* – ¼ tsp.

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STOP *running noses* *and open stuffed noses orally*

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Doctors, too, like "Premarin"®

THE doctor's room in the hospital is used for a variety of reasons. Most any morning, you will find the internist talking with the surgeon, the resident discussing a case with the gynecologist, or the pediatrician in for a cigarette. It's sort of a club, this room, and it's a good place to get the low-down on "Premarin" therapy.

If you listen, you'll learn not only that doctors like "Premarin," but *why* they like it.

The reasons are fairly simple. Doctors like "Premarin," in the first place, because it really relieves the symptoms of the menopause. It doesn't just mask them — it replaces what the patient lacks — natural estrogen. Furthermore, if the patient is suffering from headache, insomnia, and arthritic-like symptoms due to estrogen deficiency, "Premarin" takes care of that, too.

"Premarin," conjugated estrogens (equine), is available as tablets and liquid, and also in combination with meprobamate or methyltestosterone.

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What's she doing that's of medical interest?

s drinking a glass of pure Florida ge juice. And that's important to physician for several reasons.

ow your patients obtain their vita- or any of the other nutrients found trus fruits is of great medical inter- considering the fact there are so y wrong ways of doing it, so many titutes and imitations for the real g.

ctually, there's no better way for young lady to obtain her vitamin C by doing just what she is doing, for there's no better source than oranges and grapefruit ripened in the Florida sunshine. There's no substitute for the result of nature's own mysterious chemistry, flourishing in the warmth of this luxurious peninsula.

An obvious truth, you might say, but not so obvious to the parents of many teen-agers.

We know that a tall glass of orange juice is just about the best thing they can reach for when they raid the refrigerator. We also know that if you encourage this refreshing and healthful habit among your young patients — and for that matter, your patients of any age — you'll be helping them to the finest between-meals drink there is.

Nothing has ever matched the quality of Florida citrus—watched over as it is by a State Commission that enforces the world's highest standards for quality in fresh, frozen, canned or cartoned citrus fruits and juices.

That's why the young lady's activities are of medical interest.

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Dosage: 2 Tablets B.I.D. (A.M. & P.M.)

in premenstrual tension only neo Bromth® treats the whole syndrome





It was the introduction of neo Bromth several years ago that created such widespread interest in the premenstrual syndrome—because of neo Bromth's specific ability to prevent the development of the condition in the first place.

The action of neo Bromth is not limited merely to control of abnormal water retention, or of nervousness, or of pain—or any other single or several of the multiple manifestations characteristic of premenstrual tension. neo Bromth effectively controls the *whole* syndrome.

neo Bromth is also completely free from the undesirable side effects associated with such limited-action therapy as ammonium chloride, hormones, tranquilizers and potent diuretics. neo Bromth has continued to prove to be the safest—as well as the most effective—treatment for premenstrual tension.

Each 80 mg. tablet contains 50 mg. Pamabrom, and 30 mg. pyrilamine maleate. Dosage is 2 tablets twice daily (morning and night) beginning 5 to 7 days before menstruation. Discontinue when the flow starts.

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SALUTENSIN™

Hydroflumethiazide • Reserpine • Protoveratrine A

An integrated multi-therapeutic antihypertensive, that combines in balanced proportions three clinically proven antihypertensives.

In each **SALUTENSIN** Tablet:

Saluron® (hydroflumethiazide)—
a saluretic-antihypertensive ..... 50 mg.

Reserpine—a tranquilizing drug with
peripheral vasorelaxant effects ..... 0.125 mg.

Protoveratrine A—a centrally mediated
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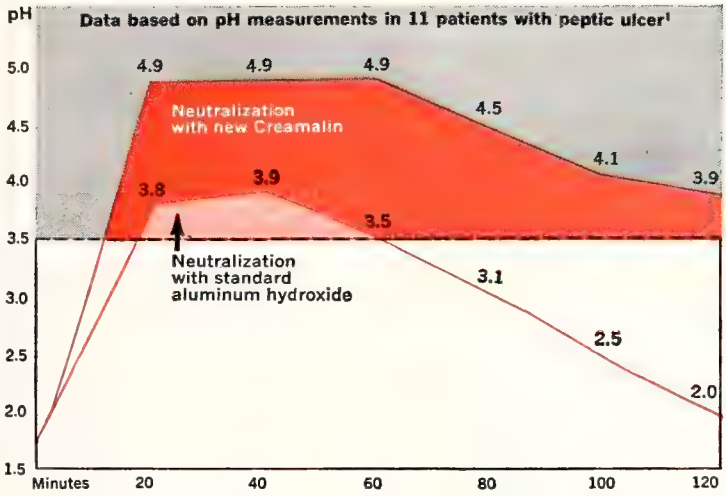
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At the site of peptic ulcer



Following determination of basal secretion, intragastric pH was continuously determined by means of frequent readings over a two-hour period.



neutralization is much faster and twice as long with

New CREAMALIN® ANTACID TABLETS

New proof in vivo[1] of the much greater efficacy of new Creamalin tablets over standard aluminum hydroxide has now been obtained. Results of comparative tests on patients with peptic ulcer, measured by an intragastric pH electrode, show that new Creamalin neutralizes acid from 40 to 65 per cent faster than the standard preparation. This neutralization (pH 3.5 or above) is maintained for approximately one hour longer.

New Creamalin provides virtually the same effects as a liquid antacid[2] with the convenience of a tablet.

Nonconstipating and pleasant-tasting, new Creamalin antacid tablets will not produce "acid rebound" or alkalosis.

Each new Creamalin antacid tablet contains 320 mg. of specially processed, highly reactive, short polymer dried aluminum hydroxide gel (stabilized with hexitol) with 75 mg. of magnesium hydroxide. Minute particles of the powder offer a vastly increased surface area for quicker and more complete acid neutralization.

Dosage: Gastric hyperacidity — from 2 to 4 tablets as necessary. Peptic ulcer or gastritis — from 2 to 4 tablets every two to four hours. Tablets may be chewed, swallowed whole with water or milk, or allowed to dissolve in the mouth. **How supplied:** Bottles of 50, 100, 200 and 1000.

1. Data in the files of the Department of Medical Research, Winthrop Laboratories. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: **J. Am. Pharm. A.** (Scient. Ed.) 48:384, July, 1959.

Winthrop LABORATORIES
New York 18, N. Y.

for peptic ulcer ■ gastritis ■ gastric hyperacidity



"Sometimes, when I have a running nose, I'd like to clear it with TRIAMINIC®— just to check out that systemic absorption business.

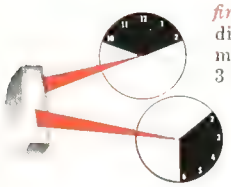
Reaches all nasal and paranasal membranes, huh?"

...and for humans with RUNNING NOSES...

You can't reach the entire nasal and paranasal mucosa by putting medication in a man's nostrils — any more than you could by trying to pour it down an elephant's trunk. TRIAMINIC, by contrast, reaches *all* respiratory membranes *systemically* to provide more effective, longer-lasting relief. And TRIAMINIC avoids topical medication hazards such as ciliary inhibition, rebound congestion, and "nose drop addiction."

Indications: nasal and paranasal congestion, sinusitis, postnasal drip, upper respiratory allergy.

Relief is prompt and prolonged because of this special timed-release action:



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Each tsp. (5 ml.) of Triaminic Syrup provides:
¼ the formulation of the Triaminic Tablet.
Dosage (to be administered every 3 or 4 hours):
Adults — 1 or 2 tsp.; *Children 6 to 12* — 1 tsp.;
Children 1 to 6 — ½ tsp.; *Children under 1* — ¼ tsp.

TRIAMINIC®

timed-release tablets, juvelets, and syrup

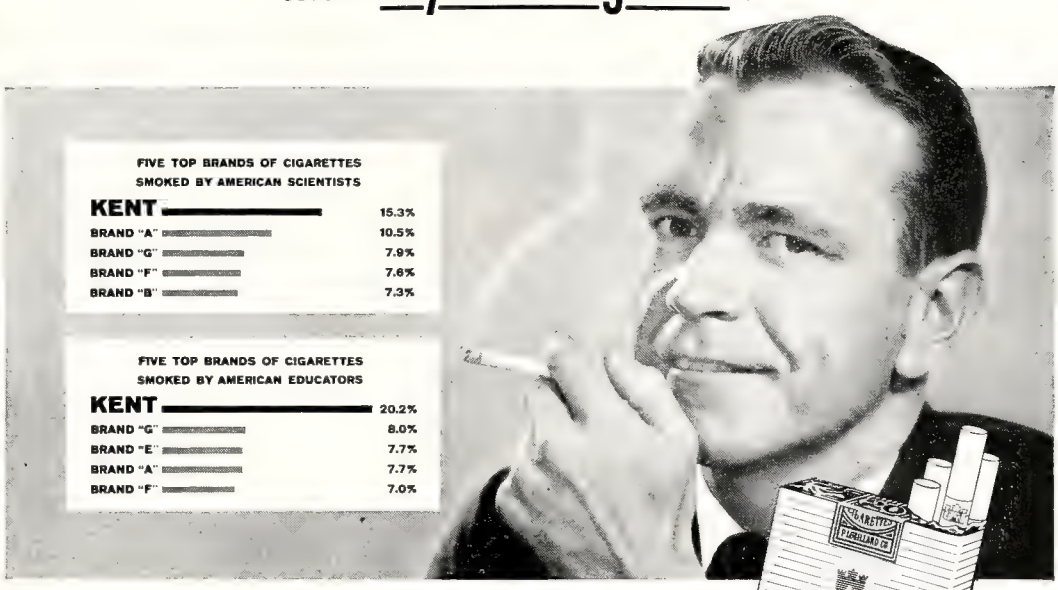
STOP *running noses* *and open stuffed noses orally*

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Lifts depression...as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient – *they often aggravate anxiety and tension.*

And although amphetamine-barbiturate combinations may counteract excessive stimulation – *they often deepen depression.*

In contrast to such "seesaw" effects, Deprol's smooth, *balanced* action lifts depression as it calms anxiety – both at the same time.

Acts swiftly – the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly – often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely – no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function – frequently reported with other antidepressant drugs.

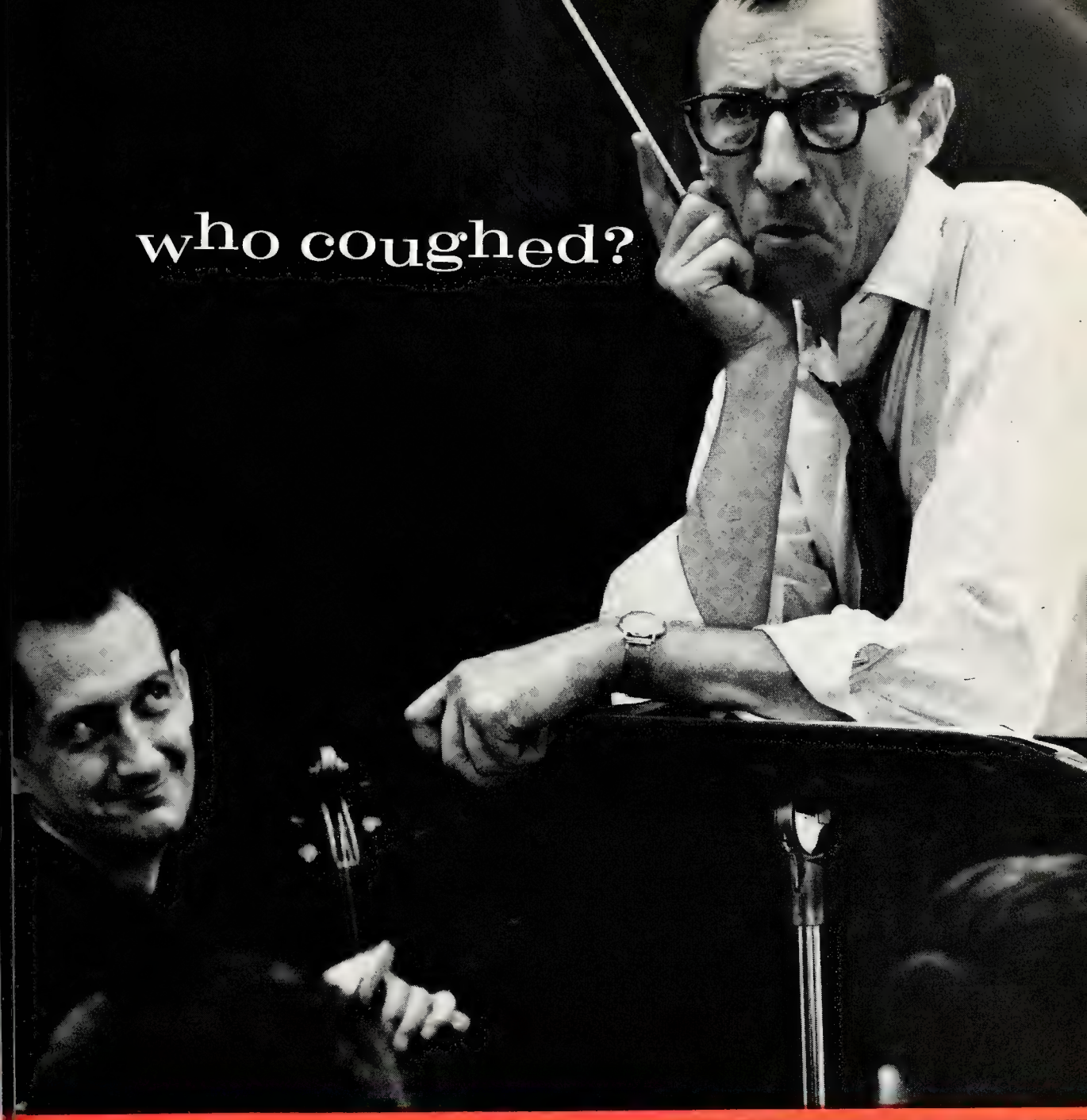
Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. **Supplied:** Bottles of 50 light-pink, scored tablets. Write for literature and samples.

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WALLACE LABORATORIES / *New Brunswick, N. J.*

CD-2179



WHENEVER COUGH THERAPY IS INDICATED

HYCOMINE® Syrup

THE COMPLETE Rx FOR COUGH CONTROL

cough sedative | antihistamine decongestant | expectorant

■ relieves cough and associated symptoms in 15-20 minutes ■ effective for 6 hours or longer ■ promotes expectoration ■ rarely constipates ■ agreeably cherry-flavored

Each teaspoonful (5 cc.) of HYCOMINE* Syrup contains:

Hycodan®		
Dihydrocodeinone Bitartrate (Warning: May be habit-forming)	5 mg.	6.5 mg.
Homatropine Methylbromide	1.5 mg.	
Pyrilamine Maleate		12.5 mg.
Phenylephrine Hydrochloride		10 mg.
Ammonium Chloride		60 mg.
Sodium Citrate		85 mg.

Average adult dose: One teaspoonful after meals and at bedtime. May be habit-forming. Federal law permits oral prescription.

Endo®

Literature on request

ENDO LABORATORIES
Richmond Hill 18, New York

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even in allergic infants



FROM A CLINICAL STUDY* IN ANNALS OF ALLERGY

Patients	200 infants and children, ages 2 months to 14 years
Diagnosis	Perennial allergic rhinitis
Therapy	Dimetane Elixir
Results	in 149, *good* results / in 40, *fair* results
Side Effects	Encountered in *only* 7 patients (in all except one, the side effect was mild drowsiness)

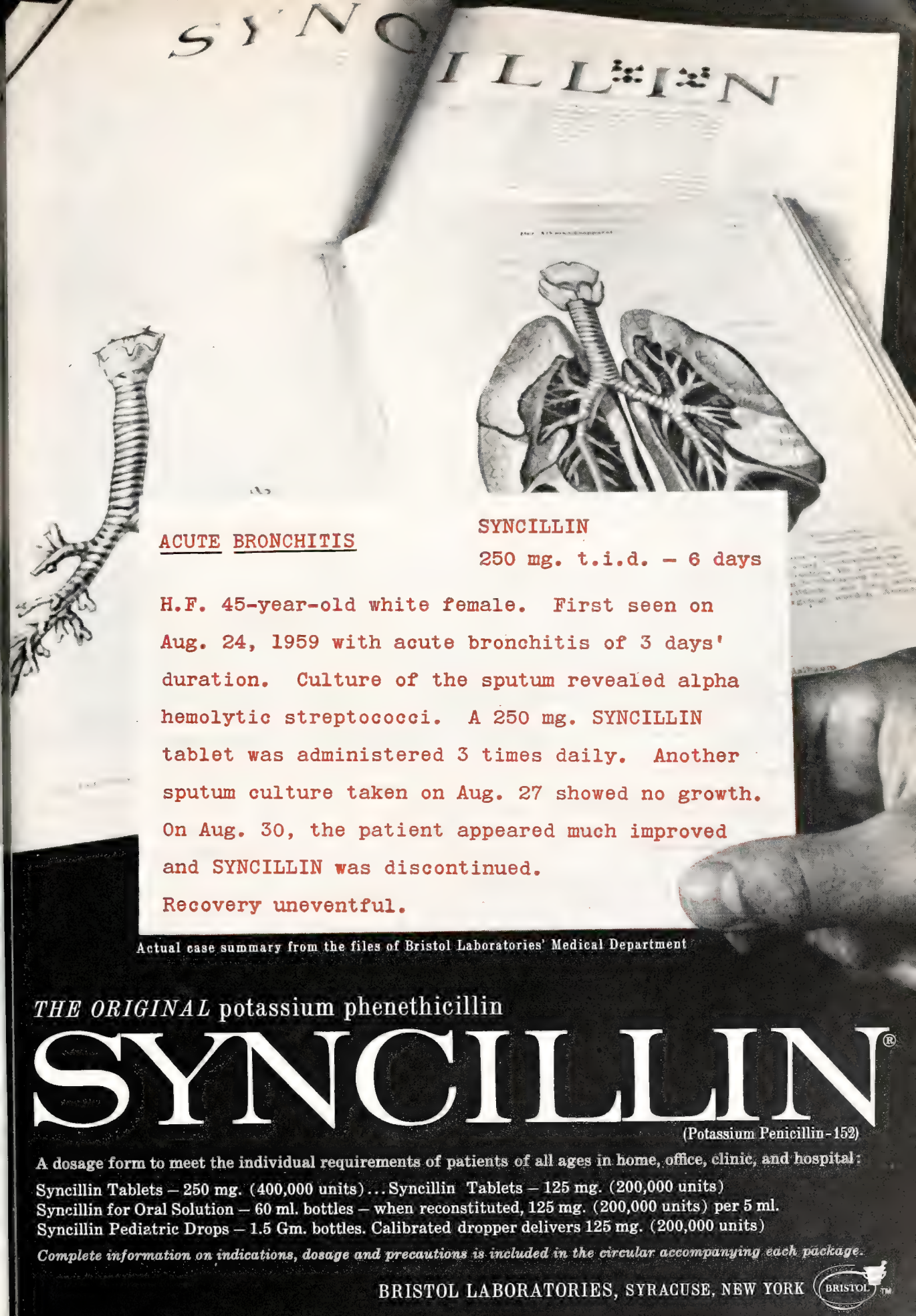
In allergic patients *of all ages,* Dimetane has been shown to work with an effectiveness rate of about 90% and to produce an exceptionally low incidence of side effects. Complete clinical data are available on request to the Medical Department. *Supplied:* DIMETANE Extentabs® (12 mg.), Tablets (4 mg.), Elixir (2 mg./5 cc.), new DIMETANE-TEN Injectable (10 mg./cc.) or new DIMETANE-100 Injectable (100 mg./cc.).

Robins

*MC GOVERN, J. P., MC ELHENNEY, T. R., HALL, T. R., AND BURDON, K.D.: ANNALS OF ALLERGY 17:915, 1959.

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† PARABROMDYLAMINE MALEATE



ACUTE BRONCHITIS

SYNCILLIN
250 mg. t.i.d. – 6 days

H.F. 45-year-old white female. First seen on Aug. 24, 1959 with acute bronchitis of 3 days' duration. Culture of the sputum revealed alpha hemolytic streptococci. A 250 mg. SYNCILLIN tablet was administered 3 times daily. Another sputum culture taken on Aug. 27 showed no growth. On Aug. 30, the patient appeared much improved and SYNCILLIN was discontinued.
Recovery uneventful.

Actual case summary from the files of Bristol Laboratories' Medical Department

THE ORIGINAL potassium phenethicillin

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A dosage form to meet the individual requirements of patients of all ages in home, office, clinic, and hospital:

Syncillin Tablets – 250 mg. (400,000 units)... Syncillin Tablets – 125 mg. (200,000 units)
Syncillin for Oral Solution – 60 ml. bottles – when reconstituted, 125 mg. (200,000 units) per 5 ml.
Syncillin Pediatric Drops – 1.5 Gm. bottles. Calibrated dropper delivers 125 mg. (200,000 units)

Complete information on indications, dosage and precautions is included in the circular accompanying each package.

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for maximum effectiveness Recently, Griffith[1] reported that V-Cillin K produces antibacterial activity in the serum against penicillin-sensitive pathogens which is unsurpassed by any other form of oral penicillin. This helps explain why physicians have consistently found that V-Cillin K gives a dependable clinical response.

for unmatched speed Peak levels of antibacterial activity are attained within fifteen to thirty minutes—faster than with any other oral penicillin.[1]

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Prescribe V-Cillin K in scored tablets of 125 and 250 mg., or V-Cillin K, Pediatric, in 40 and 80-cc. bottles.

1. Griffith, R. S.: Comparison of Antibiotic Activity in Sera Following the Administration of Three Different Penicillins, Antibiotic Med. & Clin. Therapy, 7:No. 2 (February), 1960.

V-CILLIN K® (penicillin V potassium, Lilly)

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NORTH CAROLINA MEDICAL JOURNAL

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VOLUME 21 SEPTEMBER, 1960 No. 9

Meeting North Carolina's Occupational Health Needs Through Our State Agencies

EMIL T. CHANLETT*

CHAPEL HILL

In our occupational pursuits, there are two important standards of measurement. One is external—that of productivity. The other is internal—that of personal gratification, as we seek to be worthy of our own self-esteem and the esteem of those who work and live with us. In this process importance of physical and mental well-being is so obvious that one wonders why so little concerted study has been directed to the relationship between occupation and health. We are all aware of our individual efforts in this matter and may even take some pride in our accomplishments. The particular business of this Occupational Health Council is to consider how we may direct our efforts in concert, with a reasonable expectation of larger benefits and greater returns through our integrated strength.

A variety of definitions have been proposed for occupational health, and many of these are useful. The intuitive concept of the term is accurate. Concretely, it means that employees and employers in good health enjoy fatter pay checks, more efficient production, and larger profits. Therefore, a matter of such importance merits the expenditure of time, thought, and money.

The factors making for good or bad health at work are much the same as those operating elsewhere, although they may differ in character and intensity. There are accidents. There is exposure to poisonous gases, vapors, dusts, and fumes; to unusual forms of physical energy such as radiation, noise, heat, and light. There is exposure to, and contraction of, communicable diseases. There is the degeneration or loss of full physiologic function of our various organs and members, including our skin. There are the manifold influences that determine our feelings and modes of adaptation, which have much to do with our effectiveness and our happiness. All these factors are the concern of this Council, with the exception of the prevention of accidents in industry. Comparable councils are already dealing with accidents and aiding the agencies which face the grim task of reducing accident tolls.

There are four state agencies which have direct responsibilities and functions in occupational health in our state. Three deal with the prevention and detection of and the compensation for occupational diseases. Portions of these functions are allocated by statute to the Department of Labor, the Industrial Commission, and the State Board of Health. The fourth is concerned with the salvage through vocational rehabilitation of those disabled by disease or injury. The Division of Vocational Rehabilitation within the State Board of Education serves the victims not only of occupational disabilities, but of other misfortunes as well. The occupational health activities of these agencies have been substantially confined to the narrow front of occupational disease control. This is in keeping with our North Carolina statutes and the codes and rules made under them which are explicit with regard to specific functions of three of the agencies. A brief review of their powers and functions will be useful.

Department of Labor

Our Labor Department has the powers of inspection, enforcement, and prosecution under all laws relating to conditions of work. These include rule-making powers pertaining to accidents and occupational diseases. Rules have been promulgated relating to all

*Professor of Sanitary Engineering, the School of Public Health, University of North Carolina, Chapel Hill.

industries and to particular places of work, including requirements for adequate exhaust ventilation systems to remove dust, gases, and fumes known to be capable of producing occupational diseases. The Labor Department also regulates matters of cleanliness, sanitary facilities, lighting, and air-conditioning.

The Labor Department's contribution in the area of occupational disease and the broader field of occupational health has been to provide legal enforcement when and where needed. Its field staff has provided educational material to employers and employee groups, and has collaborated in special courses for supervisory personnel and those particularly concerned with safety and health. In its series of industrial safety courses conducted in cooperation with North Carolina State College, the environmental phases of occupational disease control have received attention.

The field staff of safety supervisors and inspectors of the Labor Department have provided, through their observation during routine visits, many leads on hazardous situations capable of producing occupational disease. These have been referred to the staff of the State Board of Health for study and recommendations. The Department's activities, although directed primarily to the prevention of accidents, has prepared the groundwork among employers and employees for a better understanding of their joint responsibilities for health and safety.

Industrial Commission

All of us are familiar with the over-all responsibilities of the Industrial Commission, an autonomous administrative agency within the Labor Department. Its responsibilities for occupational health are clearly defined in terms of occupational diseases. This agency is responsible for the adjudication of compensation claims arising from any of the specifically stated 26 causes or conditions capable of producing occupational disease. In compensation law our North Carolina act is referred to as a scheduled coverage of occupational diseases, as claims may be made only for the causes or conditions stated in the law. The Industrial Commission has had a particular concern for claims arising from silicosis and asbestosis, as these conditions had much to do with the creation of our compensation law. The statute creating the Industrial Commission requires the reporting of occupational disease, and provides for a medical advisory committee to assist in evaluating cases and for determining the fitness of employees for work in the dusty trades.

The Industrial Commission has faithfully administered our compensation law, including the orderly and rapid processing of claims arising from occupational diseases with a continued emphasis and stress upon the diseases arising in the dusty trades. The staff of the Commission has provided safety instruction, through organized classes, through its publications, and through the promotion of the Annual State-Wide Safety Conference. In all these media, the importance of occupational diseases as a cause of disability and death has received compelling attention.

The Industrial Commission is an indispensable and valuable source of statistical data on the cases, claims, disabilities, and deaths arising from occupational diseases, and on the direct cost which these impose upon us all. A by-product of one of its studies of factors contributing to industrial accidents is new knowledge on the importance of healthful living to the efficiency and happiness of employees. A staff study has shown that the sort of breakfast eaten and how a weekend is spent influence the frequency and time of occurrence of industrial accidents. These observations recently captured nationwide attention. It was certainly an interesting hint of the potential that we have for working together in occupational health.

Division of Vocational Rehabilitation

The Division of Vocational Rehabilitation has the function of renewing people for employment who have been disabled, through any means, in any place, or under any conditions. Its services are not restricted to those whose disability has been incurred in the course of employment. Working cooperatively with a federal agency, this organization provides services for the disabled which embrace medical repair, counsel, guidance and training, and assistance in finding a new and productive place in our society. It is a process of restoration which pays rich dividends in self-respect and in lightening the community's cost for carrying the unfortunate.

State Board of Health

Our State Board of Health has general as well as specific powers and responsibili-

ties with regard to occupational health. Under its general powers relating to health and sanitary conditions, the power to investigate the effect of employment upon the public health is specifically mentioned.

The Occupational Health Section of the State Board of Health, formerly known as the Division of Industrial Hygiene, is designated as the technical and professional agent of the Industrial Commission for the detection and prevention of occupational diseases and for medical advice in the adjudication of claims. Although its activities have been closely related to the needs of the Industrial Commission, the Occupational Health Section is an integral part of the State Board of Health. A small group of specialized personnel was originally made possible through federal funds to which this state was entitled under the Social Security Act. Federal assistance continues, although there is now substantial support from the state. The staff presently consists of a medical director, an industrial nurse, two industrial hygiene enginers, two industrial hygienists, x-ray technicians, and secretarial personnel.

This group directly serves the dusty trades by providing x-ray examinations of all employees exposed to silica or asbestos dust, with further physical evaluation when needed. A physician supplies medical information for compensation hearings through reports, affidavits, and even direct testimony when required. A field engineering staff carries out an extensive schedule of air-sampling to determine dust concentration where silica or asbestos are present. This same group makes recommendations for dust control by appropriate engineering methods such as ventilation, isolation, and wetting.

In spite of the fact that the direct services rendered the dusty trades make heavy demands on the time and funds of the small staff, the group has provided medical and engineering services as well as air-sampling in all instances of known or suspected cases of occupational disease which have been brought to its attention. Requests for such services arise from the Industrial Commission, the Labor Department, the North Carolina Rating Bureau, from industrial management and employee groups, and occasionally from local health departments. There have been numerous field studies of exposure to such notorious toxic substances as lead, benzol, zinc oxide, vapors of paint solvents, and exposure to radiation from radium, polonium, and radioisotopes. There is liaison with the U. S. Atomic Energy Commission when the latter inspects licensed users of AEC material in North Carolina.

The professional engineering staff of the Occupational Health Service has initiated survey studies on such matters as x-ray shoefitting machines, x-ray and fluoroscopic machines used in health departments, hospitals, and physicians' offices; on exposure to solvent vapors in the furniture industry; and on carbon monoxide from heating devices in motels and tourist cabins. This staff has provided consultant service on exhaust ventilation for the control of toxic vapors, gases, fumes, and dusts. Such service has reached plants in many parts of our state, with much of it directed to smaller organizations which did not have ready access to technical knowledge.

The one area in which the activities of the Occupational Health Section of the State Board of Health have not been directly oriented to occupational disease prevention and control is that of consultation to industrial nurses. This activity was limited in scope, time, and geography until the present year. Until 1958 it was carried on by a nurse stationed in Asheville who could only devote part of her time in industrial nursing activities. Beginning this year, a competent, full-time nurse is assigned directly to the Occupational Health Section and is giving a wider coverage to the some 225 industrial nurses employed in North Carolina, as well as consultation to establishments which are considering employing a nurse for the benefit of their employees. This is looked to as a happy sign of occupational health activities yet to come.

Limitations and Problems

Within the limitations imposed upon them, these organizations have served the state admirably, and have cooperated with one another spontaneously and well. The limitations are not only budgetary; some are statutory. Many arise from the multitudinous duties imposed on the heads of departments and divisions, depriving them of time for thoughtful, creative development of interagency planning in the realm of occupational health. This has resulted in activities which are limited and late. This sketchy review indicates that action has been substantially limited to occupational disease. Even in that instance it has been late in the sense that

time and energy spent in prevention are out of proportion to the time, energy and money spent in repairing the damage which has already been inflicted.

The wisdom of prevention rather than cure becomes more apparent if we translate the concept into that of a tangible product of our industry. Such sound management practices as quality control, preventive maintenance on machinery, and adherence to specifications of raw materials cut down the number of costly production "lemons." Repairing, recouping, and paying off claims for production "lemons" that have found their way to the market place is a poor investment of the production dollar. Similarly, however admirable and needful they may be, payments for hospital care, rehabilitation, and compensation claims are poor investments of the health dollar as long as any path of prevention has been left unexplored.

Occupational diseases are the key to the broad problem of occupational health, for a well planned, well executed program of occupational disease control is a stepping stone to employer and employee understanding and support of an occupational health service. As our compensation coverage of occupational diseases in North Carolina is limited by a scheduled act, we cannot claim to have complete information on all these conditions. For the 26 specific causes and conditions which are compensable, a review of the 10-year period from 1946 to 1956 reveals that the compensation and medical care of victims of occupational disease is costing from $130,000 to $150,000 per year, with the loss of 7,000 to 7,500 working days per year. Statistical records of the Industrial Commission show that the dusty trades are not the sole sources of claims, although the largest sums for single cases do arise from the mining and rock-quarrying industries. Among those paying a heavy toll in lost time and compensation claims are the cotton, woolen, and hosiery mills. The furniture and machinery manufacturing industries are also frequently found among the leading five payers of compensation claims and the leading losers of production days due to occupational diseases.

Analysis of the last five biennial reports of the Industrial Commission further shows that our occupational disease cases are widely scattered by industry types and plant size, and that agricultural pursuits are not exempt. A really significant fact is that the losses due to occupational diseases are unnecessary. Our North Carolina organizations have the professional and technical knowledge and a cadre of professional persons to deal with the occupational disease problems in North Carolina industries.

Questions That Merit Consideration

From these rather general remarks concerning the occupational health activities of our State agencies, several questions may be drawn which merit the thoughtful consideration of this council: What is needed to make occupational disease control more effective? What devices would help to formalize and insure the coordination of the activities of the present agencies? Can our teaching hospitals participate in such services as a diagnostic clinic for occupational diseases? What steps are needed to increase the interest of private physicians in the occurrence of occupational diseases among the breadwinners of the families they now serve? What forms of employer and employee education on occupational disease hazards and their control are most certain of acceptance and success?

Beyond the matter of occupational disease control, there is evidence of relatively little governmental promotion of industry supported health services. This raises questions for which answers may be neither quick nor easy. What steps are needed to encourage management, workers, and doctors to undertake a coordinated effort to raise the level of occupational health in our state? What increases must be made in the staffs of our state agencies if they are to exercise leadership and be of practical help, particularly to our smaller plants? What steps can be taken to mobilize the potential contributions which local health departments and community hospitals are capable of making to the maintenance of a higher level of health among the most important person in their communities—the wage earners?

It is certain that these questions, incomplete and poorly framed, have already raised many new ones in your minds. As these or others like them are discussed, their complexity should be neither frustrating nor discouraging. They are the daily business of many of us. They are matters of economic necessity which must be met by sound management practices.

Conclusion

It has been demonstrated in the experiences of plants throughout our country, and

in some in our own state, that well planned occupational health work will reduce absenteeism, reduce insurance costs, and make for higher morale and more efficient production. Our Governor has repeatedly expressed his conviction that occupational health is vital to the economic progress of our state. The work of this council will certainly contribute to our state drive for an increase in industrial plants and for a greater diversification of our agriculture. A productive occupational health program will reduce our labor turnover, and will encourage more of our best trained workers to stay in North Carolina. This council is the platform upon which to develop a cooperative effort in occupational health among employers, employees, state and local governmental agencies, and the several professions. Success in such cooperation is certain to enhance the attractiveness of North Carolina resources for capital investors. Our goal is growth. Healthy and happy workers, sound in body and in mind, are as vital as dollars in making the wheels of production go round and in making them grow.

Economic Influences of an Industrial Medical Program On a County Medical Society

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and
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It is a well known and accepted fact that a thoughtfully conceived and skillfully rendered industrial medical program can have a favorable economic impact on such matters as labor turn-over, absenteeism, and workmen's compensation insurance premium rates[1,2]. It is less well known but equally true that such a program can also have an important economic effect on the private practice of medicine. In an effort to cast light on the matter, this essay will offer a review of a 10-year experience of physician participation in a company-sponsored Blue Cross insurance program of a relatively large industry.

Approximately 11 years ago, this industry employed its first full-time medical director. A few months later, equipment, space and medical staff personnel were acquired. Thereafter a modern industrial medical program was gradually put into effect.

Early Effects

During the first several months rumblings of a suspicious discontent arose from the county medical society. Questions of this sort were asked: "What are you going to do with all that space and equipment?" "Are you going to treat workers for their personal illnesses?" "Are you going to take care of employees' families?" In a climate of mutual good will, the members of the county medical society slowly began to realize that the primary preventive orientation of the industrial medical program was a viable reality and not just a high-sounding statement of policy gibberish.

Figure 1 shows the number of claims filed against the company's Blue Cross insurance plan by physicians in the community. During the early years of the study only three members of the county medical society were active in private practice. These physicians are designated as Doctors A, B and C. It can be noted that during the first three years of this study the claims filed by each of these physicians more than doubled. It is thought that a large part of this increase in medical activity was a direct result of the industrial medical program which, through the medium of employee meetings, medical films, and so forth, emphasized the importance of health and publicized the benefit program. Because of the growing medical opportunities, beginning in 1953 three additional physicians migrated into the community. They are represented in figure 1 as Doctors D, E and F.

The total number of claims per year is shown in figure 2. It is significant that in 1952 the number of claims more than doubled. It was in this year that the services of a second full-time industrial physician were acquired. A program of periodic physi-

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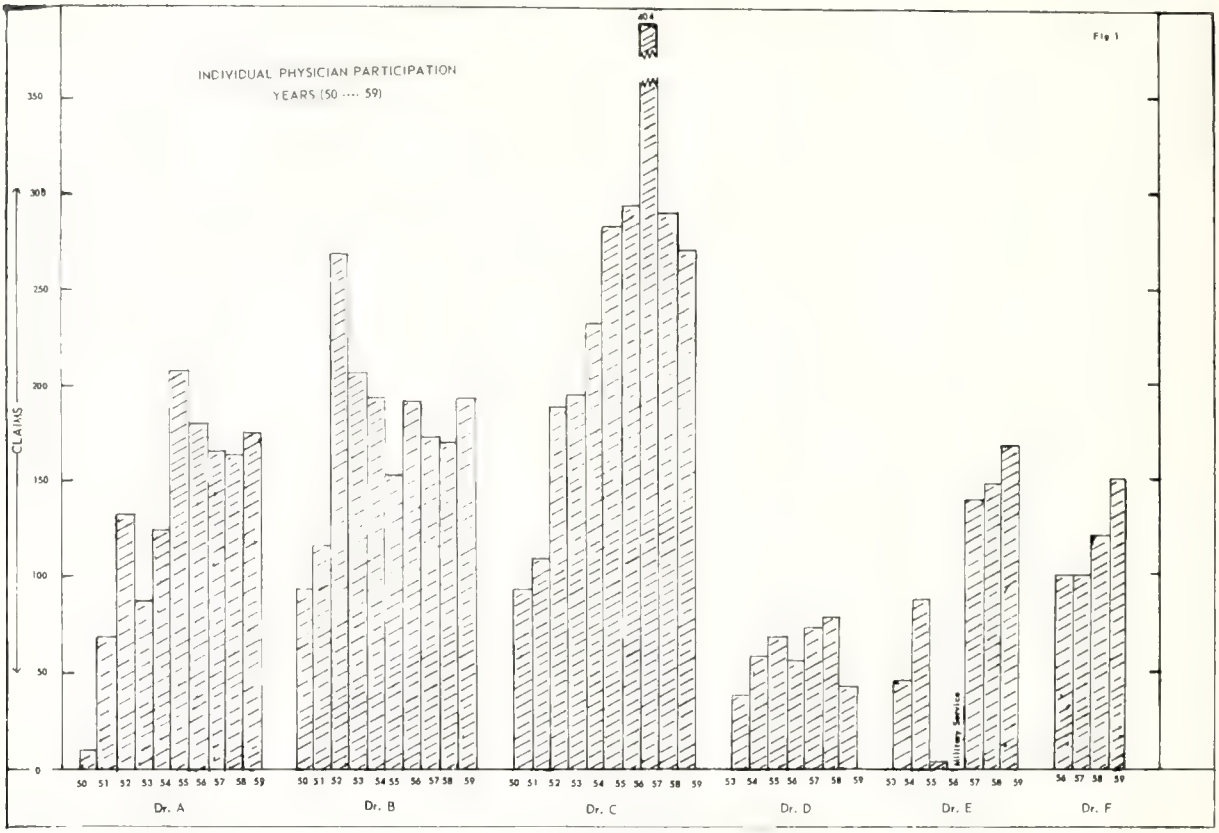


Figure 1

cal examinations for all employees was begun, and a backlog of abnormalities was uncovered. As a result, literally hundreds of employees were referred to their personal physicians for additional diagnostic study and care.

Although the number of employees remained essentially constant, in 1956 another sharp rise in claims occurred. In this year two new services were added to the industrial medical program: (1) an annual gynocologic survey[3]; (2) a proctologic survey of all men over 40. These case-finding programs resulted in many additional referrals.

These facts and figures give definition to one type of medical activity which has had a precise and significant impact on the economy of a county medical society. More important is the implication that these figures provide a faithful index of a general increase in community medical affairs, resulting primarily from the impetus provided by an active industrial medical program.

Description of Program

It is a fact that many physicians in private practice regard industrial medicine as a somewhat vague, third-party device which may potentially interfere with their private practice. In an effort to dispel the wariness that many feel with regard to the unknown, there follows a description of the medical program of the industry referred to in this study. With certain modifications, this program is typical of industrial medical practice nationwide.

A. Physical examinations

1. *Pre-placement physical examinations:* The pre-placement physical examination is becoming standard in American industry. It is a multi-purpose procedure, the primary importance of which is to allow employers to bring into their organizations workers with known physical assets. In addition, it facilitates the skillful placement of workers with physical limitations. Rejection occasionally is necessary.

In order for a physician to participate effectively in the placement of workers, it is mandatory that he have an intimate knowledge of working conditions within the plant. He must know the demands, both physical,

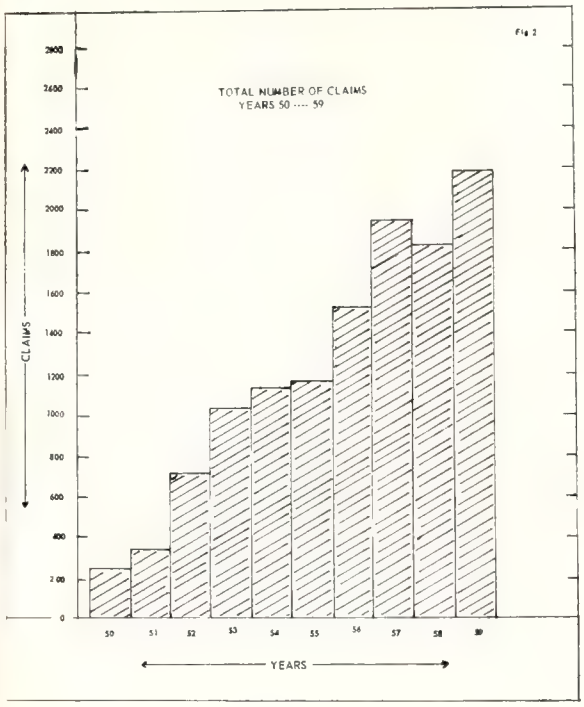


Figure 2

emotional and intellectual, of the various jobs, and he should attempt to calibrate the assets of the candidate for employment with the demands of the job.

A pre-placement physical examination can provide an important base-line of employee health against which later examinations can be appraised more skillfully.

2. *Periodic physical examinations:* Modern medical thinking is increasingly supporting the principle of periodic physical examinations for all persons who have more than a casual interest in their health. Industry is taking the lead in this movement. This development has come about partly because of the obvious good sense of preserving manpower. Trained manpower represents industry's most valuable and hard-to-replace asset. In terms of machinery and equipment, it is a fact that good maintenance can prevent early obsolescence and, in some cases, can even prevent operational failure. The same idea is equally true when applied to an industrial worker. Industry has found that it is not necessary to stand idly by and absorb the losses of premature failure of manpower[4]. Speaking broadly, health is not a matter of chance. In fact, a certain and important degree of health is purchasable. Thoughtful management supports this principle. The wisdom of the early detection of disease is apparent to all medically oriented persons. These ideas underlie industry's interest in periodic physical examinations.

The techniques of an examination done in industry are different from those used in private practice. As a group, industrial workers come to industrial doctors as well patients. Their complaints are few. This puts the onus of responsibility for finding abnormalities squarely in the doctor's hands. He needs to be a scientifically oriented as well as an intuitive diagnostician. The meaning of subtle changes in physiology must be understood by the physician examining asymptomatic patients.

3. *Special examinations for workers exposed to increased hazards:* In most industries there are work areas of increased hazard, involving such matters as dust, noise, chemical atmospheric pollution, and chronic and recurrent psychologic stress. Workers exposed to hazards of this sort should have pertinent physical examinations at appropriate intervals.

4. *Back-to-work examinations after illness:* Workers returning to their jobs after having suffered a significant injury or illness should be appraised regarding their ability to return to their usual duties. Sometimes—for example, after disabling injuries involving the bones and joints—it is necessary for employees to make permanent changes in their type of work. Occasionally, after suffering an infectious disease, an employee will return too soon and while he is still a source of contagion. Obvious medical precautions should be enforced.

B. Therapeutic services for

1. *Industrially induced illnesses and accidents:* A nationwide pattern which provides definitive therapy for occupational injuries or diseases is being established. In most states, workmen's compensation legislation defines the responsibilities of employers and the limits of monetary claims by employees.

2. *Personal illnesses and accidents:* The appropriate extent of therapy for personal illnesses is a little more difficult to define. It is usual to provide medical care which will enable an employee to complete his shift or will provide relief of pain, and to treat minor conditions which would not take the employee to his personal physician. When therapy goes beyond this point, it probably is not profitable to the industry, and it usually will

bring the industrial physician into sharp issue with local medical practitioners[5]. Competition with or replacement of conventional medical agencies should be scrupulously avoided. The industrial physician can, however, render valuable service by providing counsel and guidance concerning sources of specialized medical care for personal illnesses.

The part-time industrial physician has a particularly delicate problem in connection with the treatment of personal illnesses. He must be continuously vigilant in order to avoid using his industrial relationship to build up a private practice. The principle of free choice of physician must always be kept in mind. Except where there is a valid personal physician relationship with an industrial worker, referrals should be to the office of the worker's private physician and not to the office of the part-time industrial physician. Obviously, in some situations this may be difficult, especially in very small communities where the part-time industrial physician is one of a small number of physicians residing in the locality.

C. Health education

Health education can take many forms, and it certainly should include the more usual, such as distribution of printed material, bulletin board posters, group lectures, and the like. Perhaps the most important way of educating an industrial population involves the long and sometimes tedious individual doctor-patient contact, as, for example, that which takes place at the periodic physical examination. These examinations should be carried out in a climate of warmth and friendliness, and they contribute to progressive rapport. The ready availability of a physician who is willing and able to interpret medical questions asked by employees provides additional opportunity for health education.

D. Industrial hygiene

The safety of the working environment is the concern of the industrial hygienist. He monitors the work areas to determine the degree and hazard of exposure to chemicals, radiation, dust, and so forth. Activities related to industrial hygiene are usually coordinated as a part of the services of the industrial medical department.

E. Medical records

An important part of any medical program involves good record-keeping, the principal reasons being: (1) They enable the progress to be followed of any sick or injured employee; (2) they provide a basis for adjudication in cases of compensable injuries; (3) they enable an objective industrial physician to appraise the activities of his department and, when indicated, to modify his program.

F. Special activities

Depending on the intellectual and personality turn of the physician and the industrial management which he represents, special activities can be conceived and carried out. Typical services provided in this broad category are:

1. Preventive immunizations[6].

2. The follow-up of workers with known or suspected chronic diseases, such as hypertension, obesity or diabetes.

3. Clinical psychology services[7]. Industrial problems involving engineering, production, finances or sales are often readily amenable to resolution. There is no such ready resolution of problems involving the apparently increasing number of psychologically maladjusted and disturbed persons. The industrial psychologist is gaining status and increasingly is taking his place as an important member of the industrial medical team.

4. Foot care[8]. Problems involving painful feet are more frequent than is generally recognized. While not usually totally disabling, they can be distracting. A skillful podiatrist can offer an industry a service which consistently receives a warm reception.

5. Proctologic and Gynecologic Surveys[3]. As a rule, assembly line techniques should be avoided in industrial practice. However, in certain types of survey activities, results justify the means. Part-time or visiting consultants can frequently be integrated into such surveys.

6. Diabetic detection. This service should be continuous, and workers who visit the medical department should be encouraged to leave a specimen of urine in the clinical laboratory. This affords the opportunity to detect and put under treatment the new diabetic patient in the interval between periodic physical examinations.

Conclusion

A program of the sort described in this paper can be expected to have a very favorable economic influence on the private practice of medicine in an industrial community.

Traditionally the medical profession has been concerned with sickness and disease. The ground rules of industrial medicine allow — even require — that doctors concern themselves with health—the natural history of health as an entity[9]. Industrial medicine is changing the custom of waiting for anatomic and physiologic default. Intervention in the interest of health promotion is a new pattern, and it can now be accomplished by the application of documented techniques of health education and of early detection and prevention of disease.

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Compensable Occupational Diseases Under the North Carolina Workmen's Compensation Act

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The North Carolina Industrial Commission is an administrative agency of the state which is charged with the responsibility of administering the North Carolina Workmen's Compensation Act. The Commission was created in 1929 by the State Legislature, and its duties, power, and authorities come from statute law, as enacted by the Legislature and as interpreted by the Supreme Court.

The economic theory underlying workmen's compensation is referred to frequently as the doctrine of occupational risk.

The history of workmen's compensation legislation shows that the state legislators intended to enact compensation laws to cover these fundamental points:

1. Provide to victims of work accidents and occupational diseases and their dependents certain prompt and reasonable compensation, plus medical treatment for the worker for injuries which arose out of and in the course of his employment.

2. Free the courts from delays, costs, and tremendous work-load of this mass of personal injury litigation.

3. Relieve public and private charities of the fundamental drain caused by uncompensated industrial accidents.

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Designation of Occupational Diseases

Under the provisions of North Carolina Workmen's Compensation Act, certain diseases are designated as being occupational diseases. The Act enumerates 27 causes or conditions which result in compensable occupational diseases, and defines the Commission's responsibility for occupational health in terms of such diseases.

The following diseases and conditions have been classified as occupational diseases within the meaning of the Act:

1. Anthrax
2. Arsenic poisoning
3. Brass poisoning
4. Zinc poisoning
5. Manganese poisoning
6. Lead poisoning
7. Mercury poisoning
8. Phosphorus poisoning
9. Poisoning by carbon bisulphide, methanol, naphtha or volatile halogenated hydrocarbons
10. Chrome ulceration
11. Compressed-air illness
12. Poisoning by benzol, or by nitro and amido derivatives of benzol (dinitrol-benzol, anilin, and others)
13. Infection or inflammation of the skin or eyes or other external contact surfaces or oral or nasal cavities due to irritating oils, cutting compounds, chemical dust, liquids, fumes, gases or vapors, and any other materials or substances

Table 1
Summary of Occupational Diseases Handled by The North Carolina Industrial Commission July 1, 1958, through June 30, 1959

Causes and Diseases	Total No. of Cases	Total Compensation	Total Medical Cost	Total Days Lost
Anthrax	1	$	$ 210	7
Arsenic	16	10	393	23
Asbestosis	1	6,000		
Blisters	8	456	263	104
Bone felon	5	27	216	17
Bursitis of elbow	5	45	334	23
Bursitis over patella	2		81	5
Brucellosis	1	175	396	35
Carbon bisulphide	3	680	349	36
Carbon dioxide	1		5	
Carbon monoxide	16	185	1,056	101
Caustics				
Cellulitis	7	38	209	19
Chlorine	1		89	
Formaldehyde	6		186	
Infection or inflammation to skin or eyes due to specific substances	258	12,187	21,387	2,592
Lead poisoning	9	552	851	170
Myopia				
Nitrobenzol				
Occupational neurosis				
Petroleum distillates	1		20	
Silicosis (16)*	21	120,169	1,976	2,231
Synovitis	28	1,216	1,099	375
Wood poisoning	1		2	
Zinc poisoning	1		63	2
All other poisoning	13	1,120	829	258
Overall totals (16)	405	$142,860	$30,014	5,998

14. Epitheliomatous cancer or ulceration of the skin or of the corneal surface of the eye due to tar, pitch, bitumen, mineral oil, or paraffin, or any compound, product or residue of any of these substances
15. Radium poisoning or injury by x-rays
16. Blisters due to use of tools or appliances in the employment
17. Bursitis due to intermittent pressure in the employment
18. Miner's nystagmus
19. Bone felon due to constant or intermittent pressure in employment
20. Synovitis, caused by trauma in employment
21. Tenosynovitis, caused by trauma in employment
22. Carbon monoxide poisoning
23. Poisoning by sulphuric, hydrochloric or hydrofluoric acid
24. Asbestosis
25. Silicosis
26. Psittacosis
27. Undulant fever

Diseases caused by the use of chemicals shall be termed occupational diseases only when the employee has been exposed to the chemicals mentioned above, in his employment, in such quantities, and with such frequency as to cause the compensable disease.

Coverage

Claims may be made only for diseases resulting from these enumerated causes or conditions. Complete coverage of *all* occupational diseases has been the trend in workmen's compensation laws during recent years. Eighteen states, including North Carolina, however, cover only certain enumerated diseases. Three states have no provision whatever in their laws for coverage of occupational diseases, but full coverage can be provided for under workmen's compensation law by various methods. One is by simple definition of the term "injury," which in various states has various meanings; in some states it includes occupational diseases. In other states full coverage has been obtained by amending the law and adding other diseases to the schedule listing of diseases.

A person disabled by occupational disease, if it arises out of and in the course of his employment, should be as much entitled to workmen's compensation benefits as a person disabled by an accidental work injury. In either case the worker is actually injured, whether it be from disease or accident, and in either case the disability has arisen out of the worker's employment or the environmental condition of his employment.

Claims Filed in North Carolina for 1958-1959

The following table presents a recapitulation of claims for occupational diseases filed

with the Commission during the fiscal year 1958-1959.

Silicosis and asbestosis constitute the major cost of occupational disease adjudicated under the North Carolina Workmen's Compensation Law. However, the incidence of these diseases is gradually being reduced in North Carolina as various safety methods are brought into play and as more interest is shown by employers and employees in eliminating dust hazards.

The expanding use of atomic energy for industrial purposes is resulting in the exposure of more and more workers to the hazard of ionizing radiation. Provision of workmen's compensation protection for all gainfully employed workers who may be exposed to ionization radiation is a problem which needs serious study, as well as the use of certain new chemicals in industry. At the present time no one seems to know just what would be the best course to pursue in this respect.

The use of new chemicals and atomic energy is presenting a new challenge in the field of occupational diseases, and it will take the full cooperation of the medical profession, the employer, the employee, and the general public to solve this problem.

Radiation Hazards in Industry

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Recognition of the harmful effects of ionizing radiation occurred shortly after the discovery of x-ray and radium in 1895. The acute effects of high doses of x-ray were seen in 1896 and the carcinogenic effect in 1902. Although cases of radiation injury have continued to spot the record since that time, the potential sources were comparatively small until the beginning, in 1942, of what has been called the "Nuclear Age." In the early forties the vast growth of the nuclear industry with the Manhattan Engineering District, subsequently to become the Atomic Energy Commission, involved extremely large operations—a very rapid expansion—conducted under Federal Government control with a very high degree of secrecy. These factors contributed to the result that the nuclear industry grew up with an exceptionally good record of radiation health control in contrast to most of the other industrial hazards, which have been controlled only after a certain amount of human injury was experienced. Another result of the unique beginning has been a certain aura of mystery surrounding radiation, radiation hazards, and radiation effects, which persists to a large extent to the present.

The current operations of the Atomic Energy Commission are carried out mainly under contracts, and involve more than 100,000 employees. Most of them work in large industries, each of which has a well staffed health and safety department.

The Atomic Energy Act of 1954 provided for a program of radioisotope licenses, which has greatly expanded the amount of radioactive material that is available to private industries and individuals not under the comprehensive surveillance of the Atomic Energy Commission. The result has been that smaller installations, much smaller in many cases, have come into the radiation business. A more competitive situation often exists under these conditions, and the result is sometimes felt by the health protection staffs involved. The smaller organizations having licenses necessarily have smaller health staffs, usually with less training in the special field of radiation health. More and more general practitioners, internists, and surgeons have become involved in providing these services, often on a part-time basis. It is therefore apparent that there is a need for greater understanding and education in the medical field regarding radiation hazards and the treatment of radiation injury.

Effects of Radiation

No medical effect of radiation is unique from an etiologic standpoint. Some effects, however, are not often associated with other causes. Some of the better known harmful effects of radiation follow.

High dosage

The acute radiation syndrome which follows a short exposure to a high dose of ex-

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ternal penetrating radiation of several hundred or more roentgens is well documented and offers little diagnostic difficulty, particularly when there is a good history of dosage. The condition has been seen in patients receiving radiation therapy, in the Japanese and Marshallese radiation experience, and in an occasional industrial accident.

Acute erythema and chronic trophic effects on the skin following doses of the order of thousands of roentgens have been known since shortly following the discovery of the x-ray.

Some carcinogenic effects of radiation have been well documented. There were the leukemias of the early radiologists and of the Japanese; the bone sarcomas of the radium dial painters and of the patients given radium therapeutically during the thirties; the skin cancers of the early x-ray workers; the liver sarcomas of patients who were given thorium dioxide as a contrast medium, and the bronchogenic cancer in miners, which occurred as early as the middle nineteenth century but was not attributed to radon and its daughters until 1942.

Cataracts have been seen occasionally, particularly in workers with the earlier cyclotron and other high energy accelerators who received high doses to their lenses. Temporary sterility has occurred in cases of high, acute radiation doses. In all the above cases the doses have been very high, in the order of hundreds or thousands of roentgens.

Genetic mutations have been shown to occur in fruit flies and in mice, and it is probable that a similar effect would occur in a human population, although it is not likely to be measurable in any practical human situation because of statistical limitations. With regard to the genetic effect, it is the total dose of radiation to an inbreeding population rather than the dose to any segment or individual that is significant.

In laboratory animals it has been demonstrated statistically that high doses of radiation have nonspecific life-shortening effects, but the evidence in studies on human beings is not conclusive.

Low dosage

All the above effects have resulted from relatively large doses of radiation. No conclusive demonstration of injury from low doses of ionizing radiation in human beings has been made as yet. Our estimation of the effects of low doses, therefore, must be based on the effects of high doses. Since the information available is not sufficient to permit the demonstration of the threshold that exists for most other noxious agents, in general the effects of low doses have been estimated on the basis of a linear interpolation from the effects of high doses, which yields probably the most pessimistic interpretation.

Standards

Several groups have developed standards of radiation exposure that are currently in use in this country. In 1929 an organization which subsequently became known as the National Committee on Radiation Protection and Measurements (NCRP), began developing standards of exposure based on the hazards of x-ray and radium, which were the main sources of radiation in those early days. The committee is an independent group. It has been expanded and diversified in the intervening years to meet industrial needs, and has published several handbooks which have proved useful in the field of radiation protection. Currently the most widely used are Handbook 59, which presents standards of exposure to external radiation[1], and Handbook 69, which lists standards of concentration in air and water for some 240 radioisotopes[2].

The American Standards Association (ASA) has developed and is developing radiation standards and codes covering several different phases of the nuclear industry.

In 1959 the President and the Congress established the Federal Radiation Council (FRC), which is a cabinet-level organization with responsibility to " . . . advise the President with respect to radiation matters, directly or indirectly affecting health, including guidance for all federal agencies in the formulation of radiation standards and in the establishment and execution of programs of cooperation with States . . . " Report No. 1 of the FRC was issued on May 13, 1960[3].

These three organizations are not in direct competition with each other. In general, the NCRP has developed primary and secondary standards of exposure on a broad basis, the ASA has written detailed codes of operation and measurements, and the FRC has provided an official basis for the government use of radiation standards and coordinated application of standards at the level of federal agencies.

In general, the values are in agreement. For external exposure of the whole body to radiation, the occupational value is 3

Table 1

External Exposure of AEC Radiation Workers, 1958

Dose in Rems	No. of Employees
0 - 1	59,455
1 - 2	4,041
2 - 3	1,652
3 - 4	407
4 - 5	171
5 - 6	67
6 - 7	31
7 - 8	27
8 - 9	23
9 - 10	11
10 - 11	4
11 - 12	1
12 - 13	3
13 - 14	2
14 - 15	0
15 plus	12

rems per quarter and an average of 5 rems per year. For parts of the body or individual organs, the standard of exposure is generally higher.

Exposures

The actual exposures to workers in radiation from occupational sources can be seen in table 1, which is a tabulation of the recorded external radiation doses to Atomic Energy Commission radiation workers for 1958.

Although this tabulation represents only one year's record, it is typical of the exposures of other years. It is apparent that the great majority of the doses were very low compared to the radiation standards in effect. All the higher doses resulted from accidental exposures, and only a few of those were above the standard of 3 rems per quarter or an average of 5 rems per year.

In table 2 are listed most of the sources and approximate doses of radiation to which the average population is exposed currently. The values were derived from the Federal Radiation Council Report No. 1.

Although the values are only approximate, the table serves to show that the dosage to the main population is coming from essentially two sources. The first is natural radiation, which has existed since the beginning of mankind. The other is medical x-ray, which became a factor at the turn of the century. It is apparent that such sources as industrial radiation, fallout, luminous dials, and television sets comprise only a negligible portion of the total dosage to which the average population is exposed.

Prevention

The practice of occupational health in radiation industry is almost entirely preventive, very little being curative. Certainly this represents the desirable trend in occupational health in general, but the radiation case seems to be in the forefront of the trend. There have been a total of three accidental deaths caused by the Manhattan Engineering District and Atomic Energy Commission operations, constituting about 1 per cent of all industrial deaths. Nonfatal radiation injuries probably constitute a similarly small portion of the total injuries. The total incidence of injuries due to radiation and conventional hazards has been better than that of most other industries.

Thus most of the practice of the industrial physician in a radiation industry will be conventional occupational medicine. Employees will continue to fall down, cut themselves, get burned, and become chemically intoxicated

Table 2
Approximate Average Annual Soft Tissue Radiation Dose to the Population

Source	Dose in Millirems	Comment
Natural		
External		
Cosmic rays	32-73	
Terrestrial gamma rays	25-75	
Internal		
Potassium-40	19	
Carbon-14	1.6	
Radium-226	2-15	Questionable values
Man-made		
Medical (exposure to patients)		
Diagnostic x-rays	50-100	
Therapy	—	Not available
Internal radionuclides	1-10	Questionable values
Occupational	20	High estimate
Environs of medical and industrial sources	5	High estimate
Fallout	2	
Other (luminous dials, TV, etc.)	1-3	

in almost any industrial setting. The industrial physician's main responsibility regarding the radiation hazard is to assist in the prevention of injury and of overexposure. A comparatively frequent task in some circumstances may be the decontamination of an employee—that is, the removal of radioactive material externally or, less frequently, internally. This procedure is really preventive in nature rather than curative, in that decontamination prevents the delivery of a radiation dose.

Diagnosis

The physician in a nuclear industry should be prepared for and expect occasional radiation injuries, and although the cases on which to gain experience have been few and far between, he should be prepared to diagnose and treat the injury. He should make a clear distinction between a radiation dose and a radiation effect. They are too often equated. The determination of a radiation dose is the responsibility of an industrial hygienist or health physicist; the diagnosis of a radiation effect is a medical responsibility.

Some effects are characteristic enough and appear promptly enough to make it easy to determine the cause. After a long latent period following a low or unknown dose of radiation, however, the diagnosis, may have to be based on the probabilities of the situation, many of which are essentially unknown at the present time. A statement on the diagnosis and compensation of radiation injury by the Radiation Committee and Compensation Committee of the Industrial Medical Association may be of interest in this connection[4].

Treatment

There is no specific treatment for radiation injury. This is not to say that there is no need for specific competence in the field, but rather that many of the familiar techniques for treating more conventional injuries are equally important in the treatment of those caused by radiation. The acute radiation syndrome due to exposure of the whole body is treated basically by the usual symptomatic and supportive measures. In very serious cases, bone-marrow transfusions have been tried, but this is still an experimental procedure.

The treatment of radiation burns is not basically different from that of thermal burns, and the techniques of the general and plastic surgeon will be most useful in these cases. Since the delayed effects of radiation cannot usually be differentiated from other conditions, it follows that the treatment would not be different.

Summary

With the expanding uses and usefulness of radiation and radioactive materials in industrial and everyday life, there will be increased need for the services of occupational health personnel. Injury from radiation is and should be a vanishing component of injury from all causes, and the practice of radiation health should be limited almost exclusively to prophylaxis. Much of the treatment of radiation injury is familiar from conventional medical experience, and those in the medical profession can, with some additional education in the nature of radiation and radiation hazards, contribute considerably to the field of industrial radiation health.

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Physical Requirements in Textile Manufacturing

CHARLES G. GUNN, JR., M.D.*
WINSTON-SALEM

Textile manufacturing has contributed more to the economic growth of our state than any other industry. In 1958, the last year for which we have figures, one fourth of the gross wages for all North Carolina industry (manufacturing and non-manufacturing combined) was paid to textile workers. Forty-three per cent of the manufacturing payroll was paid to textile employees in that year, and the chances of guessing the occupation of a Tar Heel industrial worker correctly were 50-50 if you said, "He's in textiles."[1]

So universal a manufacturing process affects each of us in our practice of medicine. We care for the health of textile workers in virtually every county in North Carolina (fig. 1). Of the 24 counties without textile manufacturing, all but 4 are adjacent to counties with textile plants. These non-industrial counties, of course, contribute commuting employees to the other counties. It's a sure bet that 96 per cent of the members of our State Medical Society have treated at least one textile employee (or his or her family) in the past week.

Table 1 lists the types of textile industries operating in North Carolina in 1958, with the number of employees[2].

Table 1
Types of Textile Industries in North Carolina in 1958

	Industry	No. Employees
1.	Yarn and thread mills	45,800
2.	Knitting mills	63,765
3.	Narrow woven or braided fabrics	1,859
4.	Broad woven cotton fabrics	68,477
5.	Broad woven cotton, man-made fiber and silk	23,087
6.	Broad woven wool fabrics	4,528
7.	Dyeing and finishing textiles	7,276
8.	Apparel and other finished products	26,514
9.	Floor-covering mills	900
10.	Miscellaneous textile goods	3,417
	Total	245,623

It is the purpose of this paper to review one or two typical operations in each type of major industry, describing by picture and exposition the physical requirements for an employee engaged in each representative job. Where textile manufacturing operations are related or similar—for example, nos. 3, 4, 5, 6 (table 1)—one picture and description will be used.

From Yarn to Fabric

Whatever the end product may be (nos. 2 through 10) the first step has to do with the yarn. This may be vegetable or animal fiber, or man-made (synthetic). In figure 2 a speeder tender (or roving-frame tender) is operating a machine drawing cotton sliver into roving, which will be reduced

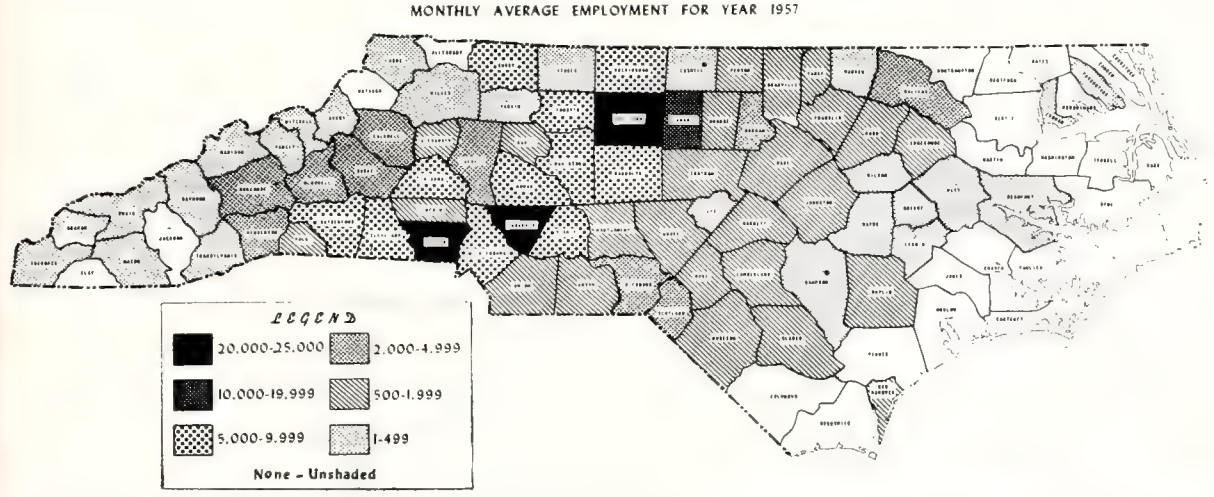
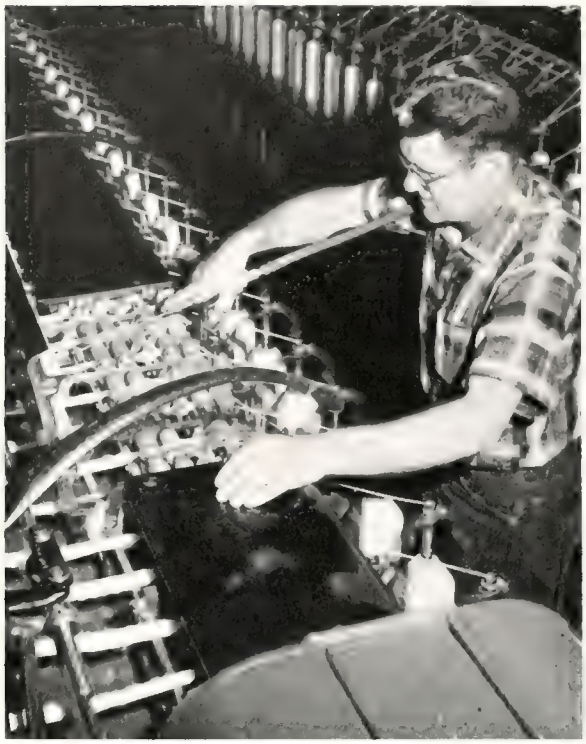


Fig. 1. County distribution of covered employment in textiles. (Courtesy, Employment Security Commission of North Carolina.)

*Medical Director, Hanes Hosiery Mills, Winston-Salem, North Carolina.



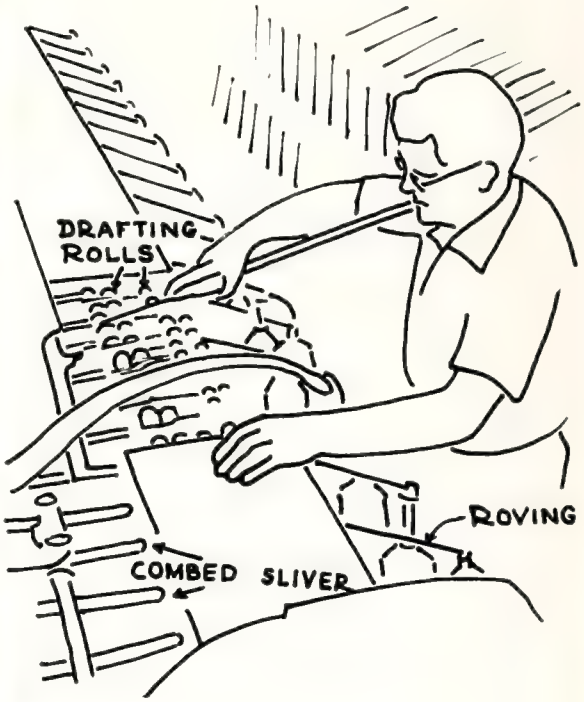


Fig. 2. Speeder tender or roving frame tender.

This speeder tender is responsible for four machines, each holding 120 bobbins of roving. He must constantly inspect for broken ends. He removes, or doffs, the completed bobbin and replaces it with an empty one. Proper humidity is essential for an efficient operation. Vision, tactile sensibility, freedom of motion in all joints (for reaching and lifting), and manual dexterity are considered primary in his work. Note the safe manner in which he carries his pneumatic roll-picker over his shoulder in the cleaning operation.



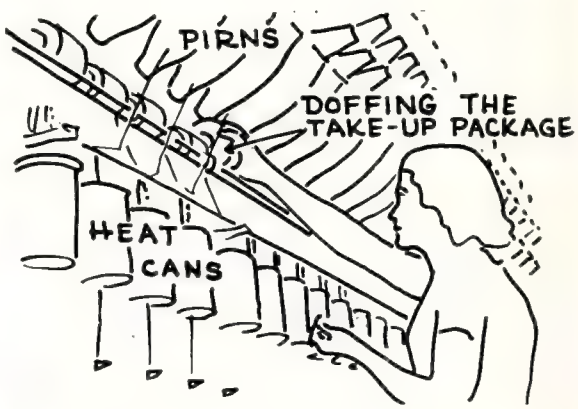


Fig. 3. Fluflon operator.

This young lady is responsible for the constant observation of more than two thousand heat cans and their pirns and take-up packages. She must watch for breaks in the yarn. She is walking 50 per cent of the time. This work requires a high degree of visual accuity, exceptional tactile sense, and a full range of motion in all joints. Again, humidity plays an important part in the quality of the finished product. Air conditioning offers a more uniform environment and product, as well as a more efficient employee. Fluflon, like nylon and dacron is a synthetic yarn.

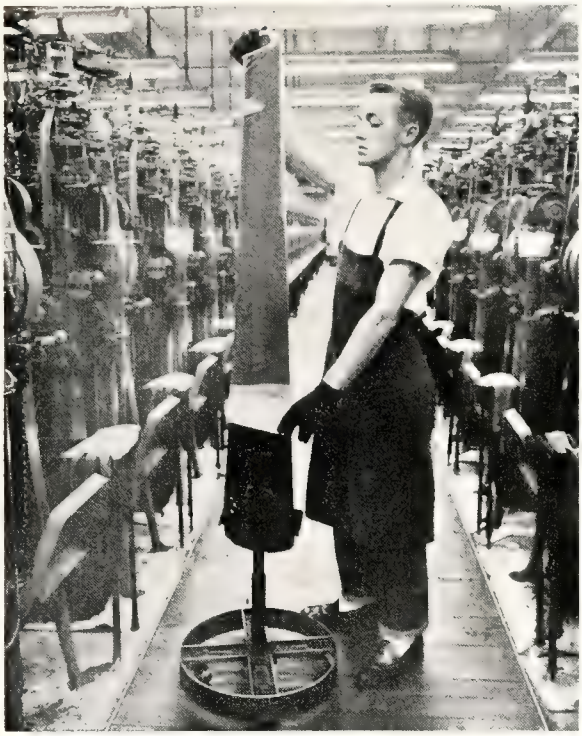


Fig. 4. Knitter.
This knitter walks along an aisle of 30 machines. He is responsible for removing the finished knit cylinder of the embryo stocking and inspecting it on a board, rolled along as he walks. Note the folding step to permit adjustments and threading at the top of the machine. Full shoulder and knee motion is a prerequisite for this operation, as is excellent manual dexterity and a mechanical aptitude. Note the pans under the machines to retain oil and prevent spread to the aisle.

even more in diameter by a similar operation before knitting (or weaving) takes place.

The chemical or thermal treatment of yarn prior to use gives it unusual characteristics. In figure 3 a fluflon operator is taking off (doffing) a take-up package upon its completion. The yarn has coursed from the pirn through a heat can while under a fixed amount of twisting and tension to give it recoil or springy properties, and upward again to the take-off package.

The two operations that put the yarn or thread, whether of natural or man-made fiber, into fabric are either knitting or weaving or a combination of the two.

Most knitting is of the circular variety—that is, the knit material forms a cylinder. The diameter of this cylinder may vary from ½ inch to 36 inches, depending upon the product being manufactured. In figure 4 a knitter in a seamless hosiery mill can be seen checking a stocking from a knitting machine. This machine has the same basic design as one knitting wider and heavier materials.

Weaving, the major industrial use of yarns in addition to knitting, can be divided into broad and narrow woven products. An example of a broad woven product is bed sheeting; of a narrow woven product, cloth tape.

In either process, the loom must be supplied with warp. In figure 5 a worker is seen inspecting the transfer of yarn from hundreds of packages or cheeses, on a rack called a creel, to the wide cylinder in the warper called the beam. The beam is then transferred to the loom (See fig. 6).

The beam furnishes the warp, whether the loom is a narrow-fabric machine or a broad loom. In figure 6 a narrow-fabric machine or loom is seen. The warp ends are brought up from the beam and down to the harness, where they emerge to meet the shuttles carrying the cross threads or filling ends. The principle involved in the broad loom is the same. Instead of many small shuttles and the resulting narrow tapes, one large shuttle is used, making a wide roll of cloth, or cut.

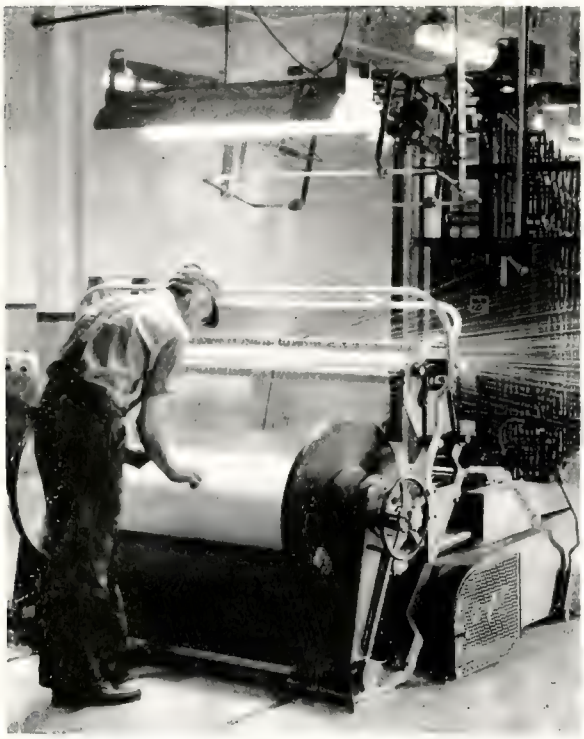


Fig. 5. Warper.
This operator is observing the transfer of yarns from the creel to the beam in a warper. He must possess a high degree of visual accuity and depth perception, an experienced tactile sense to piece ends together, and a stable back to remain at positions of slight flexion in performing his work. (Courtesy, Employment Security Commission of North Carolina.)

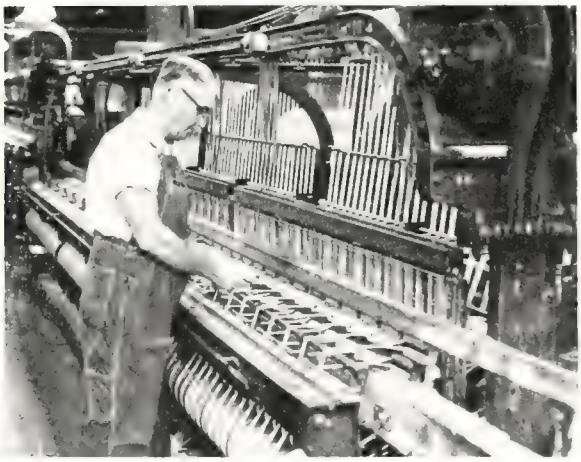
Finishing Operations

We come now to the finishing or completion operations of the textile product. One of these, performed by thousands of textile employees each day, is looping. This is the closing of the toe in the stockings, men's socks, children's socks, doll socks, and so forth, when the sock has been knit as a cylinder of fabric open at both ends (fig. 4). This work may be done prior to dyeing, or it may be performed on socks knit with yarn that is pre-dyed. The looping dial is built to mate the knitting needle intervals, and may have points ranging from 12 per inch to 40 per inch (fig. 7).

Whether fabric for the lining of your next suit or fabric for your next car or your child's pajamas, the woven and knit fabrics must be put in an attractive, useful, durable form.

Treatment of fabrics by chemicals and heat play an important role in this conditioning. In finishing mills large vats or tanks called kiers are filled with hundreds of feet of woven material. This material is steeped with chemicals or enzymes for varying periods of time, then emptied by power equipment for washing and further dyeing and finishing. Figure 8 shows the momentary repair of a break in the strand of a fabric coming from a kier to the washer.

The final dyeing of fabrics as well as yarns is accomplished by the addition of



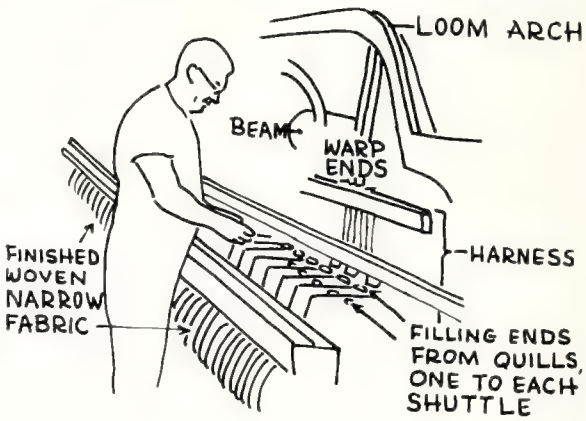


Fig. 6. Weaver.
This man is responsible for three looms. His main activity is walking, moving constantly between the machines to inspect the operation, repairing ends when breaks occur in both the warp and the filling ends. Visual acuity of a high degree is essential, as is a normal tactile sense in the fingers. Excellent range of motion in all joints assures easy operation of the loom. Back flexion is extremely important for the requirements of reaching the warp ends. Lifting is minimal in this operation. Most weaving does not require the weaver to remove or doff the finished take-up reel or cut. This operation is assigned to other employees.

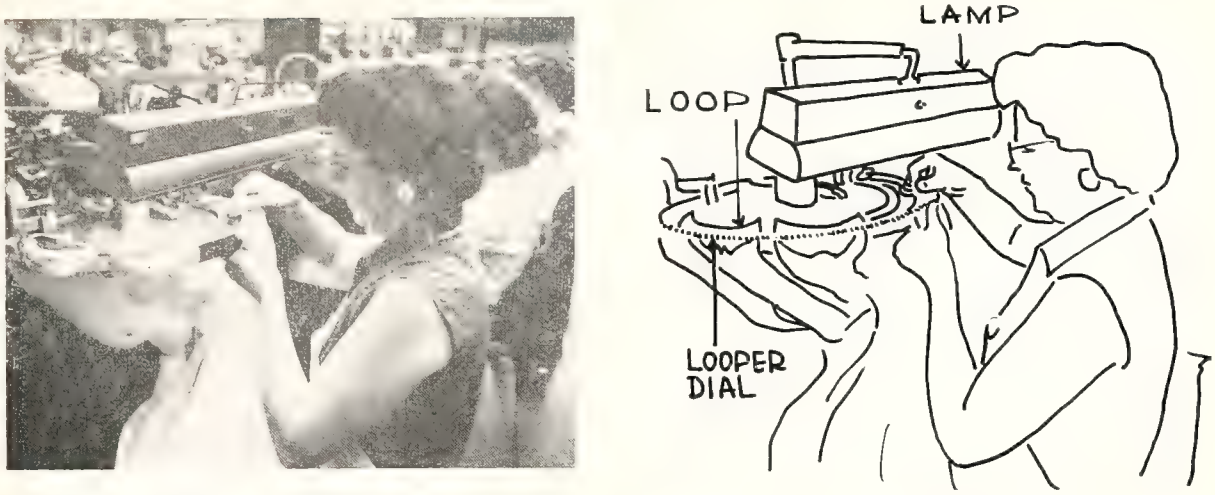


Fig. 7. Looper.

This operation—placing the stocking or sock on its "points" in the only correct position—is extremely delicate and exacting. The dial revolves (here clockwise) slowly while the fabric is applied. The final stitching and cutting of the now useless loop from the foot of the stocking is accomplished by mechanical means as it makes its tour around the dial, until the operator removes the stocking, completed, in front of her.

This work is done in a sitting position. It requires a high degree of visual acuity with an accompanying ability to converge easily (esophoria) and excellent depth perception. Tactile sensibility is of great importance. Emotional stability must be considered in any list of prerequisites.

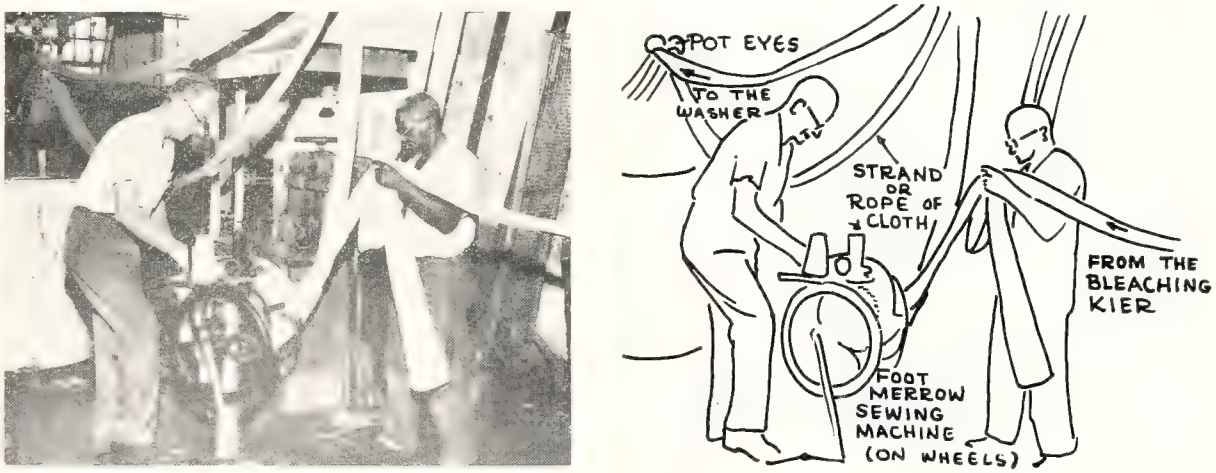


Fig. 8. Kier Boiler.

The textile worker, on the right, a kier boiler, weighs bleaching chemicals and by virture of the operation, works in an atmosphere of higher humidity and heat than that generally prevailing throughout the plant. The skin of these workers should be free of recurring infections and free of hypersensitivity to foreign materials. Strong muscles and a stable back are essential to the effective operation of the lid on the kier tank and to turning the large valves in the piping system.

dyestuffs to water at high temperatures. This creates an environment similar to that of the bleaching operation just described. Figure 9 shows a piece-dye kettle operator beside his machine in a broad woven fabric mill during a dye run.

Comment

Here, in summary, is a view of textile manufacturing from yarn to finished fabric. No summary would be complete without the final step: apparel manufacturing. In order to prevent raveling of the cut material, an overedger or serger applies, by machine, a whipped stitch. This operation is performed before the garment is assembled on a sewing machine (fig. 10).

Summary

A brief description of textile manufacturing and the work requirements of repre-





Fig. 9. Piece Dye Kettle Operator.
The taffy-like strands are long segments of 80 yards rolled over a reel and rotated at medium speed through the dye bathe. The operator is responsible for four machines, for measuring the chemicals placed in each load, for placing the cloth on the reel, and keeping records of each lot. Note that he is wearing shoe covers for protection from the moisture normally present in such operations.



Fig. 10. Sergers (Overedgers).
Sergers, or overedgers, overcast the raw edge of cloth to prevent raveling. This is a job requiring good manipulative ability, agility of hands and fingers, good visual acuity, and, as with looping, emotional stability. (Courtesy, Employment Security Commission of North Carolina.)

sentative jobs in this industry has been presented. It is hoped that this will create additional understanding of the textile industry and of the work performed by our patients in this industry.

Acknowledgements

Grateful acknowledgement in the preparation of this paper is to be given to Dr. William Wilson, Occupational Health Section, State Board of Health, Raleigh, N. C.; Mr. Ted Davis, Employment Security Commission, Raleigh, N. C.; Dr. J. M. Hall, Elkin, N. C.; Dr. Ben Pulliam, Mr. Arnold Aspden, Mr. C. Zell Taylor and Mr. H. C. Woodall, Jr., all of Winston-Salem.

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The Governor's Council on Occupational Health

A Medium of Cooperative Effort for the Health of the Worker

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CHAPEL HILL

In every period medicine has to face the problem of a twofold adaptation. On the one hand it must adjust to changes and developments in the social and economic order, and on the other hand it must find new approaches and methods for making available new or improved medical services which have been made possible through scientific and technological advances. It is customary for each generation to think its problems and developments are the greatest of any period of history, and we in the mid-twentieth century are no exception. Whether or not this is really true, it cannot be denied that the pace of the developments, both social and scientific, to which we must adapt is more rapid than in previous periods and that it is picking up speed all the time. With the accelerated pace of change it becomes increasingly difficult and increasingly important to develop sound modes of adaptation which preserve the enduring values and principles that have always guided our profession.

One of the unique characteristics of the changes of the past few decades has been the fact that they brought into the picture of medical care and medical service not only many professional workers other than physicians, but also a variety of agencies and institutions. This is making it necessary for the physician to develop a whole new set of relationships, and to learn to carry out many of his functions on a cooperative basis with the various members of what is often called the "health team," with hospitals, and with those organizations and agencies which we have termed third parties.

Occupational health programs, as they have evolved and continue to evolve, represent an adaptation to the special needs created by expanded industrialization, which has concentrated workers into large groups and exposed them to the hazards of increasingly complex technical procedures and a rapidly growing assortment of new and unfamiliar chemical and physical agents. The presently accepted pattern of occupational health programs is an achievement in which both the medical profession and our industrial society can take genuine pride. Its development has not been easy. There have been difficulties, differences of opinion and controversy, but after all that is the way most worthwhile achievements are made. The significant thing is that we have developed a philosophy, a set of principles, and a program which have met with the official approval of organized medicine and of the business and industrial community, and which, as understanding of them spreads, are gaining the warm support of the rank and file of both groups.

The other speakers are dealing with the way occupational health programs are organized and operate, and the services they provide. The feature of these programs I would like to stress, because it forms the basis for the whole idea of an occupational heath council, is the number of individuals and agencies involved in protecting and promoting the health of the worker, and the resulting importance of close, cooperative relationships among them, based on principles and objectives understood and accepted by all parties of the program.

Growth of the Occupational Health Movement in North Carolina

Those of us who have been close to developments in occupational health in North Carolina feel that significant and heartening progress has been made over the past several years. A very important beginning was made when several able, highly intelligent, and enthusiastic young men entered this field of practice in the state, and no account of developments would be complete without tribute to the splendid contributions these men have made by their enthusiastic demonstration and promotion of what constitutes good occupational health practice and what it can accomplish.

While the state medical society has had a committee in the field of industrial health since 1934, it was primarily con-

*Read before the Section on General Practice of Medicine, Medical Society of the State of North Carolina, Raleigh, May 11, 1960.

From the Department of Preventive Medicine, University of North Carolina School of Medicine, Chapel Hill.

cerned with problems referred to it, in the main related to the Industrial Com mission. The first special effort by the society to stimulate interest and understanding in this field was an industrial health seminar held at Chapel Hill in February, 1954, sponsored jointly by the University of North Carolina School of Medicine and the society's Committee on Industrial Health under the leadership of Dr. Harry L. Johnson. This seminar became an annual event, and in subsequent years was expanded to include a half day devoted to subjects of interest to representatives of business and industry and officials of state agencies having responsibilities related to industrial health and safety, as well as to physicians.

Out of these expanded seminars grew the suggestions for a state conference on occupational health sponsored by Governor Hodges, and bringing together all who might have interest or responsibilities in the field: physicians, nurses, engineers, public health workers, officials, legislators, and as wide a representation as possible from business and industry in the state. The first Governor's Conference on Occupational Health was held in January, 1957, and those attending approved a strong recommendation for a permanent council on which all the interested professions and groups would be represented. As a result of this recommendation and of Governor Hodges' interest and support, a steering group was formed to plan an organizational meeting and to lay the groundwork for selection of members. This group was composed of the Committee on Occupational Health of the State Medical Society, representatives of the State Board of Health, the Department of Labor, the Industrial Commission, the Vocational Rehabilitation Division of the Department of Public Instruction, the University of North Carolina Schools of Medicine and Public Health, and two invited representatives from industry.

The preliminary planning took almost a year and a half. Largely from a list of names suggested by the steering group, Governor Hodges asked 42 people to serve on the Council. In making the appointments, representation was provided from the medical, nursing and engineering professions, from the various state agencies concerned, from labor, and from a cross section of business and industry in the state, including large and small business and all the major industrial and business fields. An enthusiastic organizational meeting was held in July, 1958. The present membership is 44, including 13 physicians. This number will be enlarged somewhat in the near future as a result of action taken at the last meeting of the Council to add representation from the dental profession, the Department of Agriculture, and the Agricultural Extension Service.

Objectives and Functions of the Council

You will be interested in the objectives of the Council as stated in the by-laws. These are:

1. To promote interest in all phases of employee and worker health in North Carolina.
2. To provide an effective means for cooperation and interchange of informamation among all the agencies and groups interested in the problems.
3. To promote study of special hazards to employee health which may exist in North Carolina.
4. To promote the development of practical programs by which small business and industrial establishments and agricultural employers may provide health services for their employees.
5. To interpret to the officials and citizens of the state the needs and accomplishments in the occupational health field in North Carolina.
6. To sponsor an annual Governor's conference on occupational health.

Perhaps the most significant function of the Council, as distinguished from its overall objective of promoting the health of workers, is indicated by the second objective, that of providing an effective means for cooperation and interchange of information among all who have a concern for and a part in the protection and promotion of worker health. Physicians and nurses, of course, have a tradition of working together, but heretofore there has been too little opportunity to develop mutual understanding between business and industrial management and the health professions, between physicians and safety engineers, or between all of these groups and the several official agencies concerned with industrial health and safety. The Council supplies a medium where these

groups can come together and become familiar with each other's points of view and problems and can direct their efforts toward the development of more effective cooperation in promoting the health of the working population.

The establishment of such a forum for communication and exchange of ideas is in itself a significant development. As society gets more complex, the problem of communication between various groups which may impinge on each other becomes increasingly difficult. The Council with its broad representation provides a forum where thoughtful consideration can be given to the problems and ideas of each group, and some mutual understandings achieved. Through the annual Governor's Conference we have a broader forum, since the conference is open to all, and aims for a large and representative attendance.

Current Projects

Handbook on occupational health

Because the Council is new we have no completed accomplishments to report, but two of the projects presently under way are of particular interest to this group. The first is a North Carolina handbook on occupational health. This should be a valuable source of information for all concerned with the subject, but especially for physicians doing part-time industrial practice, and for management, which wants to know what legal requirements it must meet, to what sources it can turn for consultation and help, and what are approved patterns of health services for employees. It should also be of significant interest to industrial and business concerns considering locating in North Carolina. It will, of course, be given wide distribution. Most of the material has been assembled, and it is hoped the completed handbook will be available by the time the Annual Congress on Industrial Health of the A.M.A. meets in Charlotte in October.

Services to small plants

The second project is a study of possible means of providing health services to employees of establishments too small to have any kind of full-time service of their own. Occupational health programs are being developed by an increasing number of large industries, but approximately 9[illegible] per cent of North Carolina establishments have fewer than 500 employees, and nearly 80 per cent have 100 or fewer employees. It is clear, therefore, that if the majority of our state's workers are to have the benefits of such services, some plan for providing them other than the conventional in-plant medical department will have to be devised. It is equally clear that any effective plan, generally applied, will involve participation by most of the general practitioners of the state devoting some time to occupational practice.

As you perhaps know, there are a number of so-called small plant services which have attracted considerable attention. We have had people from some of them talk at our Governor's Conference. These services are excellent, and represent imaginative solutions of particular situations. The trouble is, the establishments they serve, while measured in hundreds of employees rather than thousands, are still much larger than those which constitute the largest segment of our need in North Carolina. It is worth noting that the health hazards and problems in small establishments are proportionately greater than those in larger ones. Coming up with a practical approach to this need is one of the challenges we face, and it is one to which the Council is addressing itself.

Conclusion

We may summarize this discussion with four points which I think deserve emphasis:

1. The formation of the Governor's Council on Occupational Health is but the most recent in a succession of developments marking the growth of appreciation for and interest in employee health services in North Carolina.

2. The Council offers an excellent medium for communication and cooperation among all those concerned with this field.

3. It is inaugurating activities which should make significant contributions to further progress.

4. The ultimate success of the Council and the solution of the problem of occupational health services for the majority of our state's workers will require the understanding, interest, and participation of the practicing physicians of the state.

Clinical Evaluation of the Antacid Properties of Hydrated Magnesium Aluminate

DAVID CAYER, M.D.
and
M. FRANK SOHMER, M.D.
WINSTON-SALEM

Benign peptic ulcers do not occur in patients with permanent achlorhydria. In those patients having active duodenal ulcers, gastric hypersecretion is invariably present. The relationship between ulcer and acid is well established, although no definite correlation between the degree of acidity, the severity of ulcer symptoms, and ulcer activity has been demonstrated. Clinically, antacid agents provide symptomatic relief.

General Principles of Antacid Therapy

The efficacy of an antacid depends upon (1) the quantity of acid bound, (2) the speed of buffering, (3) the duration of action, and (4) the rate of gastric emptying. The effect of acid-neutralizing drugs on gastric secretions is also influenced by (1) the amount of drug administered, (2) the phase of digestion, and (3) the presence or absence of disease.

Free acid, usually defined as being present at pH levels below 2.8, is considered responsible for the digestive effect of gastric juice. At pH levels above 2.8 the proteolytic activity of pepsin is greatly reduced. A pH in the range of 3.5 to 5.5 is regarded as favorable for ulcer healing. Levels above pH 7 may lead to "rebound" stimulation of gastric secretion, and are generally considered undesirable.

The ideal antacid preparation would be one that is nonirritating and can be used in small doses to neutralize large amounts of gastric juice promptly and for prolonged periods. It should not cause systemic alkalosis, produce a rebound stimulation of acid secretion, interfere with digestive processes, induce diarrhea or constipation, nor release carbon diovide on reacting with hydrochloric acid.

From the Department of Medicine of the Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

Studies of Hydrated Magnesium Aluminate

We have recently studied a new type of antacid produced by the chemical union of aluminum hydroxide and magnesium hydroxide, two of the most widely used antacids. The resulting compounds, hydrated magnesium aluminate*, is a uniform, stable white powder, which can be prepared both as a tablet and as a gel.

In vitro studies

In contrast to the previously described magnesium aluminates in which the ratio of magnesium to aluminum is always 1:2, hydrated magnesium aluminate has a magnesium-aluminum-water ratio of 4:2:9. The *in vitro* action of this complex differs markedly from that of equivalent physical mixtures of magnesium and aluminum hydroxide, producing more favorable, less scattered pH values within the therapeutically desired range of 3.5 to 5.5, and maintaining such levels for 40 to 60 minutes (fig. 1). The use of an equivalent physical mixture of magnesium and aluminum hydroxide produces widely scattered pH values outside the therapeutically desirable range, with less sustained buffering action.

The magnesium aluminate hydrate reacts promptly with gastric hydrochloric acid to form aluminum hydrochloride gel and magnesium chloride, each with an acid-binding effect.

The relative acid-combining capacities† of hydrated magnesium aluminate and other antacids, in terms of the amount of 0.1 normal hydrochloric acid neutralized per gram, are as follows:

U.S.P. aluminum hydroxide (dry gel)	254 cc.
Magnesium aluminate hydrate	247 cc.
Dihydroxy aluminum sodium carbonate	238 cc.
Magnesium trisilicate	140 cc.
Sodium bicarbonate	120 cc.

*Supplied as Riopan (400 mg. tablets) through the courtesy of Ayerst Laboratories.

†Determined by stirring aliquots of the substance with excess 0.1 normal hydrochloric acid at 37 C. for one hour, and back titrating the excess acid.

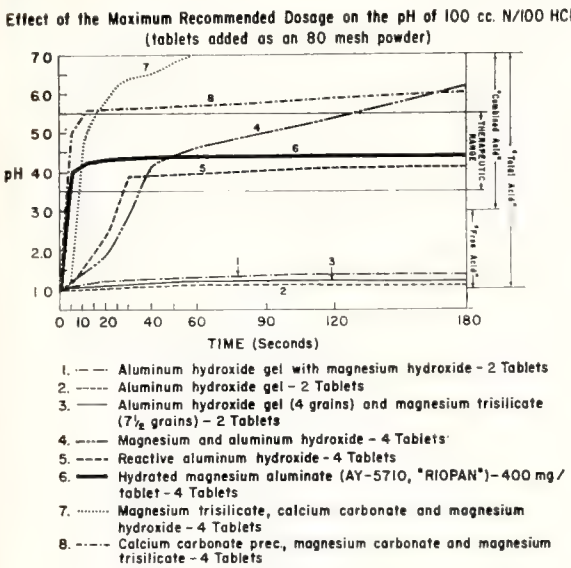


Figure 1

The acid-combining capacity and speed of action of hydrated magnesium aluminate are compared with those of other antacids in figure 1. It can be seen that the hydrated magnesium aluminate caused a rapid elevation of pH levels above 3, and sustained buffering capacity.

In vivo studies

Studies of gastric acidity were made on 10 patients—9 men and 1 woman—with active duodenal ulcers. All had evidence of gastric hypersecretion, and most of the initial acid values were in the upper range of normal (figure 2).

In 4 patients who received 2 tablets of magnesium aluminate hydrate, buffering action was demonstrable for 45 to 90 minutes. Six patients were given 4 tablets in a single dose. In these patients, a buffering effect was demonstrable for periods ranging from 30 to 120 minutes.

In 4 patients specimens of gastric secretion were taken 15 minutes after administration of 2 tablets of the drug. In one patient no buffering effect was demonstrable, but in the other 3 achlorhydria was present.

In the majority of patients effective buffering was present for one to two hours. In those patients having pain at the time the tablets were administered, relief was prompt and sustained. The average pH determinations of gastric specimens are shown in figure 2.

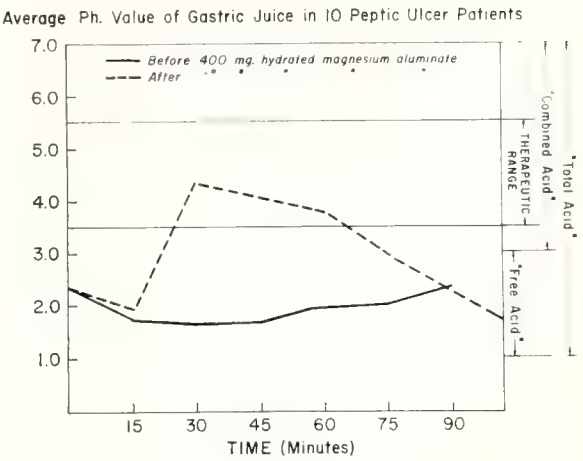


Figure 2

Clinical study

The clinical study was conducted in 72 patients — 55 men and 17 women — with symptoms of peptic ulcer. The diagnoses in this group were as follows: duodenal ulcer (63), channel ulcer (1), marginal ulcer (3), duodenal and gastric ulcers (1), duodenitis (1), normal roentgenogram (2), normal roentgenogram but with past history of ulcer (1). The patients ranged in age from 20 to 72 years, with a mean age of 45. Twenty-five patients had a past history of hemorrhage. Six patients had previously required surgery for perforation or obstruction.

Each patient had had peptic ulcer activity —as indicated by the history, roentgen findings, or both—within six months preceding the study. Fifty-three of the patients were considered to have clinically active ulcers at the beginning of the study. The duration, frequency, and severity of ulcer symptoms were determined at the beginning of treatment. The symptoms were considered mild in 32 patients, moderate in 26, and severe in 14.

The medication used in the study consisted of 2 tablets of hydrated magnesium aluminate given two hours after each meal and at bedtime. All patients were seen at intervals of four to six weeks, and in the majority roentgen examinations were made at the beginning and at the termination of the study, one year later.

Final evaluation of results was based on data recorded by patients and on the clinical impression of the investigator at each follow-up visit. The results were classified as

"good to excellent" (freedom from ulcer distress throughout the period of observation, or improvement in spite of recurrence) or "fair to poor" (exacerbation, no change, or only slight improvement with continued recurrences). Recurrences were classified as "none," "fewer and milder," "same or more."

Results: Seven patients discontinued the drug — 4 because they were asymptomatic, and 3 because they were unimproved. Two other patients had a recurrence of ulcer symptoms after they ran out of the drug. The only adverse effect noted was mild constipation in 2 cases. None of the patients who discontinued the medication considered side effects a deterrent to therapy.

Forty-nine of the patients (68 per cent) had good to excellent results (no recurrences in 35 per cent, fewer or milder recurrences in 33 per cent), while 32 per cent were unchanged or worse. Two patients had hemorrhages while under treatment, and 2 required gastric resections.

Comment

In the clinical study of 72 patients, no evidence of absorption of the hydrated magnesium aluminate was noted in any case. There was no clinical evidence of alkalosis, disturbance of electrolyte balance, severe constipation, catharsis, or any other significant side effects.

The preparation was demonstrated both *in vivo* and *in vitro* to dissolve rapidly — within 15 minutes in human patients. This compound was able to buffer large amounts of gastric acid rapidly, and in most patients to sustain the pH of the stomach at levels between 3 and 5 for approximately 60 minutes. This buffering effect was manifested clinically by prompt relief of pain. At no time did the pH values rise to alkaline levels.

Summary

Clinical and laboratory studies with hydrated magnesium aluminate indicate the compound to be a potent antacid which rapidly raises the pH of the gastric contents to therapeutically desired levels, which are sustained for periods of an hour or more.

In a clinical study of 72 patients with symptoms of peptic ulcer, no evidence of absorption, alkalosis, or disturbance of electrolyte balance was noted. In the dosage used, the compound did not interfere with digestion, and produced virtually no side effects. Results were considered "good to excellent" in 68 per cent of the cases.

Mail Order Prescription Services

H. C. McAllister*

Chapel Hill

The deceptive lure of "price discounts" has been the bait with which many a trap has been set. The latest of these is the mail order prescription services which have been springing up here and there during recent months. The development of these unorthodox schemes of supplying medication seems to have resulted from a series of circumstances.

What is believed to be the first plan to offer prescription service by mail is that developed by the National Association of Retired Teachers and the American Association of Retired Persons. These two organizations worked out an arrangement with a local New York chain drug store group to set up outlets for their members. Two mail order depots were established—one in Washington, D. C., and the other in California. The latter was later closed. (It is understood that it failed to meet the requirements of the California law.) Another outlet has been established by this group in St. Petersburg, Florida.

As a result of the newspaper headlines stemming from the reckless and misleading information (more properly misinformation) coming out of the Kefauver Committee hearings, other independent mail order prescription services have sprung up in Kansas City, Missouri; Brooklyn, New York; Seagoville, Texas. Another organizational service (Bakery and Confection Workers Union) has been established in Washington, D. C. The last mentioned has already been in municipal court for a hearing resulting from alleged failure to comply with pharm-

From the Institute of Pharmacy, Chapel Hill.

*Secretary-Treasurer of the North Carolina Board of Pharmacy.

acy, sanitation, and fire laws. At least one inquiry has been received by the Board of Pharmacy concerning a proposed outlet in North Carolina. Others will doubtless be established in order to capitalize on the favorable atmosphere created for them by the false and misleading information that is currently being spread abroad about drug prices.

Dangers and Disadvantages

Physicians want to see that their patients get medication as economically as is consistent with good quality. It is only proper that they should. Economy, however, is not the only consideration that must be taken into account in the treatment of illness by the use of drugs. The time element and the assurance of proper handling are, in most cases, considerably more important to the physician and the patient than the spurious "savings" (which, if any, are small) that might be offered by the mail order mechanism. From the standpoint of the physician—and the patient—the mail order prescription schemes have some serious disadvantages about which he—and his patient—should be informed.

Unavoidable delays

The present-day physician is not only better equipped to diagnose and prescribe than ever before, but he also has eminently better medicinal agents to meet his needs than has ever been the case in the past. These factors add up to efficient and effective treatment, as proved by the dramatic reduction in the average duration of most illnesses. To achieve this result, however, the physician must be able to administer the remedy indicated *at the time of diagnosis*—not days or weeks later, when complicating factors may have intervened, quite possibly altering the entire rationale of treatment. Allowing for trainsportation (both ways), filling, shipping, and so forth, the very minimum time in which a prescription can be serviced in Washington, D. C., from a place as near as North Carolina is three days. Persons who have used this service place the time element from ten days to two weeks. One cardiac patient requested the return of her prescription when the medication had not been received in two weeks.

Translating the cost of the minimum delay of three days into terms of any savings that might be effected, it is still false economy for the patient. Herein lies the "trap" of the whole mail order scheme. Inherent in the lure of price discounts for prescription service is the idea that traditional prescription services are rendered at a premium price. It is believed that, in general, physicians consider prescription prices fair. This is not as well understood, however, by some of their patients.

A further consideration arising from the delay in the delivery of the preparation is the encouragement of self-medication. Pending arrival of the prescribed drug, the patient has a strong urge to treat himself. Here again is introduced an element of interference with the physician's plan of treatment

Forged prescriptions

A serious problem encountered with the supply of drugs through the mails is the verification of prescriptions. There is no way whereby prescriptions can be authenticated. As a test, several forged prescription for large quantities of barbiturates and central nervous system stimulants were forwarded to one of these outlets. In due time the drugs arrived along with a solicitation of future business. Such laxity in handling prescriptions and dangerous drugs not only provides a made-to-order opportunity for deviators to obtain drugs for illicit traffic, but also can prove troublesome for the physician in the management of patients with emotional problems and others who have the "medicine habit."

Limited service

With the wide variety of medicinal preparations available today, doctors' prescriptions require less compounding than they did in former years. There are occasions, however, when compounding is necessary. Such prescriptions sent to the mail order outlets have been returned marked "not stocked."

Suspicion was aroused when it was noted that the order form of one mail-order outlet bore an entry for the customer to indicate whether he wanted his prescription filled with the organization's "generic equivalent" of the drug ordered, on the assumption that this substitute would be cheaper than the genuine article. This indicates that the mail order company is willing to substitute its judgment in determining the brand of drug supplied for that of the doctor who ordered it. Evidently this item became troublesome, since it has now been dropped from the order

form. One continues to wonder, however, if a specified brand drug will be furnished or whether the prescription will be filled with a so-called "generic equivalent" of undetermined origin.

There is yet other evidence of the limited service performed by the mail order companies. A prescription calling for 30 tablets of a drug and marked with two refill authorizations was filled with the manufacturer's original bottle of 100 tablets and returned with the explanation that they were "cheaper by the hundred."

Inaccessibility of prescription files

What is perhaps one of the most dangerous aspects of a mail order prescription service is the inaccessability of prescription files for use during emergencies resulting from idiosyncrasies or the accidental ingestion of drugs by persons other than those for whom they were prescribed. No one knows better than the physician how essential it is to identify the drug that little Johnnie drank while mother's back was turned. Time is of the essence in determining whether extreme measures shall be taken, as in the case of potent drugs, or whether simple procedures and assurances to the mother are adequate, as in the case of the less potent preparations. Then there is, of course, the occasional anaphylactic reaction wherein the identification of the antigen is essential or will materially assist in proper treatment.

Question of Legality

There is a serious question as to whether the mail order distribution of drugs is a legal operation. Individual states have the right to exercise police power for the protection of the health, safety, welfare, and morals of their citizens. It is through the use of this power that the health professions are regulated. The states have *exclusive* jurisdiction over matters of professional practice and privilege. Neither the federal government nor any other extraterritorial body can or does confer professional license and privilege upon a person within a state. State laws relating to professional practice and privilege are administered by specialized boards or agencies. These boards exercise jurisdiction only within their own state. Their activities are designed to protect the people in that particular state against ignorance and incompetency. Similarly, a professional license in one state does not entitle the holder to practice elsewhere.

This situation poses the question of whether or not the mail order mechanism constitutes the practice of pharmacy in North Carolina. Certainly the Board of Pharmacy cannot inspect these outlets to determine whether pharmaceutical services are being performed by qualified persons or whether other requirements of North Carolina law are being met. The distributors hold no professional license in the state against which the Board might proceed, nor are they available, without extradition proceedings, for other disciplinary actions as are practitioners in North Carolina against whom the Board can and does proceed. This aspect of the problem is currently receiving study by the Board. Until the question is resolved, it is believed that physicians will want to keep in mind the dangers associated with the mail order schemes, and to advise their patients accordingly.

The therapist should be a good listener. Even more important, he should have some knowledge of semantics and should reveal to the patient that he is interested in what the patient is saying. He should betray it in his manner and his personal expression as well as in what he says after the patient has expressed his opinion. Remember that a receptive ear receives the richest harvest. As a listener, the physician increases his knowledge of human nature, and he adds to his own store of cultural refinements. He will find that in enabling his patient to talk of interests other than personal aches and worries, he has effected the best therapy possible.—Martin, A. R.: Recreational Measures and Their Value to Older People, J. Am. Geriatrics Soc. 7:536 (July) 1959.

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SEPTEMBER, 1960

THE NATIONAL ELECTION

Although some of our members feel that only medical subjects should be discussed in the editorial columns of this journal, the editorial board takes the broader view that doctors need to be well rounded citizens, and that the inclusion of topics of a general nature makes for a greater appeal. The widespread interest in the Democratic and Republican Conventions justifies the assumption that some of our readers would not object to a few impressions of the political situation from a viewpoint as independent and unbiased as human nature will allow. The views expressed are those of the editor and do not necessarily reflect the opinion of the members or officials of the North Carolina Medical Society.

The nomination of the candidates for the presidency was for each party a foregone conclusion. Both successful candidates had paved the way by long and arduous groundwork. As James Reston said in his *New York Times* column for July 31: "We have two efficiency experts as presidential candidates."

The choices for the vice presidency, however, had not been settled in advance of the political conventions. The selection of Lyndon Johnson was a distinct surprise and somewhat of a shock to many. After the caustic comments Kennedy and Johnson had exchanged before the convention, Johnson's selection by Kennedy, and his ready acceptance, proved anew that politics does indeed make strange bedfellows.

The selection of Henry Cabot Lodge was not so surprising. His yeoman service in the United Nations has made him a recognized authority on our foreign relations. Parenthetically, when one recalls that his grandfather took the lead in sabotaging Woodrow Wilson's League of Nations, the active role he has played in the United Nations illustrates well John Charles McNeill's lines:

> How teasing truth a thousand faces claim,
> As in a broken mirror;
> And what a father died for in the flames,
> His own son scorns as error.

Just as Kennedy subdued his personal feelings toward Johnson in order to win his support, Nixon yielded to Nelson Rockefeller's demands for a strong civil rights plank in the Republican Platform, even at the cost of breaking away from Eisenhower's position and of offending the Southern delegates. In exchange, Rockefeller agreed to give up—for the time at least—his own presidential ambitions and to nominate Nixon, even though he could not remember the middle initial.

As the result of Mr. Nixon's need to propitiate Mr. Rockefeller, the platforms of the two parties do not offer the independent voter too much choice—though the Democrats were decidedly more lavish with promises than the Republicans. As Senator Ervin was quoted as saying, however, in an effort to make the Southern delegates accept the civil rights plank, "Platforms are made to run on, not to stand on."

There is still some ground for the opinion expressed by Dr. John K. Glen in the *Texas State Journal of Medicine* for July, 1956—that non-voters should not be censured for staying away from the polls, because there is not enough difference in the policies of

the two major parties to justify the trouble of voting: "Therefore, a host of conscientious non-voters is abuilding and becoming a mighty army. Someone has said, 'What we don't need in the United States is a third party. What we do need is a second party.' "

And a recent article in the *Saturday Review* by Professor and Mrs. Robert Rienow asserts that many non-voters are so indifferent and so ignorant of political affairs that they should not be urged to vote. At least there is much to be said for a minimum degree of intelligence as a requirement for voting. This requirement should, of course, be applied to whites as well as to non-whites.

We may expect the hardest fought campaign since Herbert Hoover defeated Al Smith. Both candidates have expressed willingness to accept the offer of free time for joint debate made by the major broadcasting systems. If rightly used, these debates should stimulate widespread interest in the campaign.

It is to be hoped that the contest will not degenerate into a mud-slinging affair, but that each candidate may take the high road instead of the low one. Both men are highly intelligent and articulate and we may expect each one to present his case forcefully. Let us hope that each candidate will think in terms of the welfare of the country instead of the number of the votes he can win by the stand—or stands—he takes. Let us hope also that citizens will decide how to vote after carefully studying the merits of each candidate and the vital issues ahead, and may the number of independent voters, and of the really conscientious non-voters, continue to increase.

* * *

SABIN LIVE-VIRUS POLIO VACCINE APPROVED

After waiting until its use in millions of people had established its safety, Surgeon General Burney has approved the general use of the Sabin attenuated live-virus vaccine. Two other live-virus vaccines have been developed—one by Lederle's Dr. Herald R. Cox, the other by Dr. Hilary Koprowski of the Wistar Institute in Philadelphia. As yet, the one developed by Dr. Albert B. Sabin of Cincinnati is the only one approved.

The acceptance of a live-virus vaccine for immunization against polio is good news for doctors, parents, and children. There is no doubt but that the live virus confers a more lasting, perhaps a permanent, immunity against polio, and the fact that it is taken by mouth in a pleasant tasting vehicle makes it far more acceptable to children, and also to adults, than the hypodermic needle method.

Although the Sabin vaccine has been approved, it will be some time yet before the manufacturers have produced enough to make it available for general use, and it is not yet certain how it will be distributed. The United States Public Health Committee on Live-Virus Vaccines believes that the most effective way to eradicate polio would be to give the vaccine in mass vaccination programs rather than in the unsaturated contact by private practitioners. This method was used in Russia and other foreign countries with very favorable results reported. The committee also recommended that the vaccination program should be continued year after year.

The problem of finding the best way to distribute the live-virus vaccine will require cooperation between private physicians and the Public Health worker. It does not seem too much to hope that the universal use of this type of vaccine may mean that before too long paralytic polio may be as rare as is typhoid now.

* * *

ABOLISH AGE DISCRIMINATION IN EMPLOYMENT?

Senator Pat McNamara deserves commendation for introducing, on June 22, a bill (S.3726) to abolish age discrimination in employment under federal contracts. In introducing the bill, Senator McNamara said in part:

> We have listened to the direct testimony of jobseekers under the age we usually think of as "old," and have studied reports about discrimination in employment against men and women of 40—even as young as 30 and 35 in some cases . . .
>
> We have adequate scientific evidence now that age by itself—especially for the group I have reference to, under 65—is absolutely no basis for deciding whether or not to hire a new worker or replace an older employee . . .
>
> Even in times of full employment—when labor is scarce—the practice of age discrimination in employment exists . . .
>
> It is more and more important that we broadcast the facts about the argument that higher pension costs are the real obstacle to hiring older workers. The Department of Labor's stud-

ies of this type of argument have concluded that such costs need not stand in the way of a sound policy of hiring on the basis of a person's actual ability to do the job—and not his or her age.

The bill I am introducing (S.3726)—with the co-sponsorship of Senators Clark and Randolph—will be a major step toward reducing this shameful and unnecessary practice.

It would show that the Government itself is practicing what it preaches—by requiring that all its contracts with furnishers of goods and services adopt personnel policies on the basis not of age—but of a person's actual physical and mental abilities to perform his work—on the basis of his personal merits—and not how long ago he was born.

This bill also requires that the Secretary of Labor organize and conduct labor-management conferences for the purpose of implementing and distributing information about the policy of the Act.

S.3726, if passed, should do much to encourage the continued usefulness and self-respect of many now forbidden gainful employment because they are past the 40-year mark.

North Carolina has been a pioneer in crusading for fair age-employment policies. In his address to the State Conference on Aging, Governor Hodges made a vigorous protest against turning people out to pasture merely because they have reached a certain age. And long before that he had endorsed a brochure entitled "A New Look at the Mature Worker," published by the Governor's Coordinating Committee on Aging. This brochure anticipated the reasoning of Senator McNamara's bill.

* * *

OCCUPATIONAL HEALTH ISSUE

Industrial—or occupational—health has become a career that is attracting more and more physicians. Next month North Carolina will for the first time be host to the A.M.A. Congress on Industrial Health, to be held in Charlotte October 1-12.

In anticipation of this important event this issue of the NORTH CAROLINA MEDICAL JOURNAL contains a collection of papers on various phases of occupational health. It will be noted that the relation of the private practitioner to this special field is stressed. These papers constitute a valuable source of information on an increasingly important subject.

THE SPEEDING AMBULANCE

A number of editorials have been written in this and other journals on the menace of the speeding ambulance. A recent news story, however, of an ambulance wrecked while conveying to the hospital the victim of another wreck gives an occasion for one more protest. The only real reason for an ambulance to speed through town with the siren wide open and flashing red lights is the advertising feature. Someone has said that it would be just as effective advertising and safer for the passenger patients if ambulances were equipped with sound devices to proclaim at frequent intervals, "This is X's ambulance!"

It is pertinent to quote again from an article in the *Journal of the Michigan State Medical Society* (September, 1957) by Drs. George J. Curry and Sydney N. Lyttle: "An ambulance averaging 30 miles per hour would require 10 minutes to travel 5 miles. To save 5 minutes, 60 miles per hour would be necessary. In 2,500 consecutive ambulance runs, this time-interval would not have influenced the course of a single injury." The authors added, however, that 36 victims were in severe shock upon arrival at the hospital and that "The degree of shock may have been increased by a rough ride in an ambulance."

Is it not time for some legal restrictions to be put upon the ambulance?

* * *

MAIL ORDER PRESCRIPTIONS

At the Miami Beach Meeting of the A.M.A. a resolution was unanimously adopted condemning prescriptions by mail order except when no other way was available. In this issue Mr. H. C. McAllister, Secretary-Treasurer of the North Carolina Board of Pharmacy, gives clear-cut and logical arguments against the prescription service by mail now being offered by many out of state concerns. Every doctor should read this article and learn from it how to advise his patients not to risk their health by falling for the lure of "price discounts." The doctor and the pharmacist should work together as a team for the benefit of the patient—and this teamwork is not possible when the pharmacist is far off in another state.

President's Message

As conscientious and ethical American practitioners of medicine, our primary motivation must always be to initiate and support those qualities of medical care which are productive for the best interests of the people of this Nation. However, the instinct of self-preservation, being perhaps the strongest instinct with which humans are endowed, motivates us as physicians, just as other organized groups in society are motivated, to advocate and support those principles which are favorable to the profession, provided they be compatible with the best interests and well-being of our people.

Controversy relates very closely to motivation and quite often, in extremes, provides an overflow of bitterness. Currently, there is tremendous awareness, controversy, and some bitterness concerned with the phenomenon of medical care within our United States. Our citizenry is currently divided into two over-all groups who have a basic divergence of opinion as to what is best for the health and well-being of our people, specifically with regard to the provision of medical care on a national level.

On the one side are those, motivated by socialistic urges and political expediency, who advocate medical care as a service of the Federal Government. This group, in effect, has already altered our Bill of Rights to include, in addition to the rights to "Life, Liberty, and the Pursuit of Happiness," the right to share the national wealth by taxation; the right of labor to strike and bargain collectively; Social Security; support and regulation for agriculture and business. Now these people would add the right to total medical care as a function and service of the Federal Government. This last right is to be furnished regardless of the individual's ability or desire to provide such service for himself.

All physicians hold the opinion that everyone is entitled to medical care. We believe, however, that the provision of this commodity, in its entirety for all people, *is not* rightfully a function of the Federal Government. In accord with physicians in this belief is an equally large, better informed, and better educated, properly motivated segment of American society. This group believes and can document the fact that socialized medicine is synonymous with inferior medical care and stagnation of medical progress through research. It is basic that a competitive spirit is yet regarded as essential to the vigor and quality of medical research and the excellence of medical care, because, as ever, it is the principal source of incentive and motivation.

Recently, a large group of business, farm, and professional people in this country prevailed upon a coalition of Northern Republicans and conservative Southern Democratic Senators to defeat a bill before the Senate designed to initiate the socialization of medicine. This bill embodied the principle of government relative to medical care as set out by the Platform of the National Democratic Party. This legislation was enthusiastically supported by the Democratic candidates for the Presidency and Vice Presidency, Senators Kennedy and Johnson. More adamant in support of this legislation were the leaders of organized labor and labor unions.

Fortunately, North Carolina has in its two Senators men of understanding character who possess the ability to analyze and understand this type of proposed legislation. Senators Ervin and Jordan are also men of stability and conviction, who possess the fortitude to vote their sincere convictions regardless of party affiliation. Both of our Senators strongly advocated the defeat of this bill designed to provide total Federal medical care to all recipients of Social Security. These men knew this bill for what it was and recognized that it would reflect to the detriment of our people.

Senators Jordan and Ervin did support and help pass a bill which meets, head on, the problem of governmental assistance in the provision of medical care for the needy and near needy. Realistically, this bill, which was supported by medicine, provides for financial participation and administration at state and local levels.

Physicians as a group or as individuals can no longer afford to hold aloof from the social, economic, or political facts of life. There is no longer room in medicine for cynicism and indifference as applied to the basic concepts of medicine as a free enter-

prise system productive of the best medical care known to the world. There are those prevalent and active who would make of our profession a trade; of our medical academies, trade schools; of the Federal Government, our employers, and of our standards of excellence, monotonous mediocrity. Medicine must tighten its ranks and protect vigorously those things which we hold to be inalienable to high quality medical care.

May I urge that all physicians commence now to give generously of themselves as well as of their possessions to support those in government and politics who uphold the principles of quality medical care for our people. It is essential, but not enough, to give your money to support our friends in government. Giving one's self, one's time, one's effort, and one's personal influence is real giving. Medicine has the potential. No group in North Carolina has the personal contacts, the opportunity, and the ability to influence the thinking of our people, to the well-being of all concerned, as do North Carolina's physicians. It is imperative that we take a few minutes each day with each contact to exercise this prerogative.

One Southern Senator, name unidentified, who recently supported conservative medical legislation gave as his reason for such action the fact that he had three thousand doctors in his state on his side. He further stated that he knew of no other group of three thousand persons whom he would rather have on his side. There is reason to believe that this was the statement of a North Carolina Senator. Let us not let him down.

AMOS N. JOHNSON, M.D.

BULLETIN BOARD

COMING MEETINGS

State

Ninth District Medical Society Symposium—Moose Lodge, Morganton, September 29.

North Carolina Fifth District Medical Society meeting—Mid Pines Club, Pinehurst, October 5.

North Carolina Society for Crippled Children and Adults, Twenty-fifth Annual Meeting—Washington-Duke Hotel, Durham, October 6-8.

Eleventh Annual Winston-Salem Heart Symposium—Robert E. Lee Hotel, Winston-Salem, October 7.

North Carolina Board of Medical Examiners, interviews with candidates for license by endorsement—Virginia Dare Hotel, Elizabeth City, October 7.

Blue Shield Plans, Annual Program Conference—Drake Hotel, Chicago, October 10-11.

A.M.A.'s Twentieth Annual Conference on Industrial Health—Charlotte, October 10-12.

Seventh District Medical Society, Annual Meeting—Gaston Country Club, Gastonia, October 19.

Duke University Postgraduate Medical Seminar Cruise to the West Indies—November 9-18.

Ninth Annual Gaston Memorial Hospital Symposium—Masonic Temple, Gastonia, November 17.

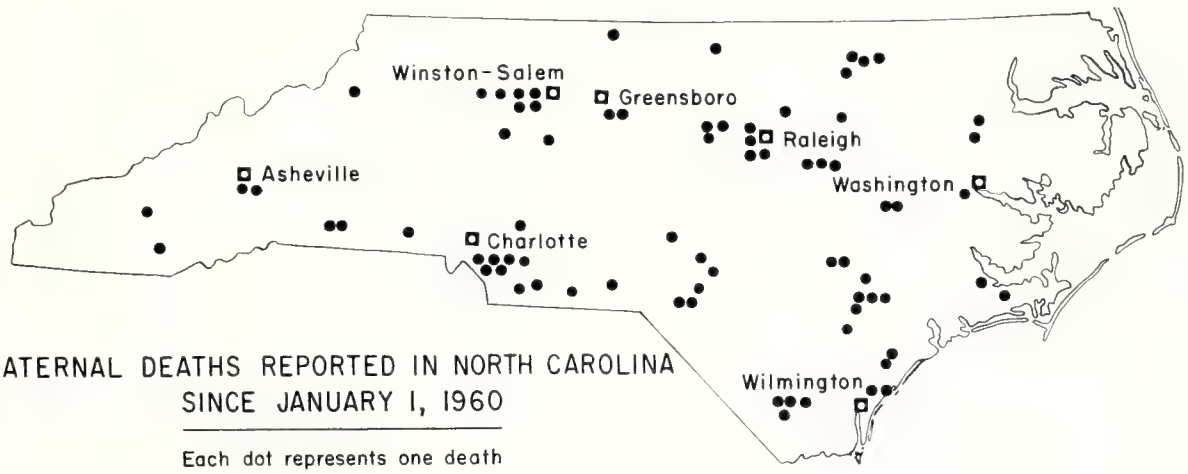
North Carolina Academy of General Practice, Annual Meeting—Carolina Hotel, Pinehurst, November 27-30.

Regional and National

A.M.A.'s First Regional Conference on Rural Health (Southeastern states)—Dinkler-Plaza Hotel, Atlanta, Georgia, October 7-8.

American College of Surgeons, Forty-sixth Annual Clinical Congress—San Francisco, October 10-14.

American Rhinologic Society, Sixth Annual Meeting—Belmont Hotel, Chicago, October 8.



MATERNAL DEATHS REPORTED IN NORTH CAROLINA SINCE JANUARY 1, 1960

Each dot represents one death

American Heart Association, Annual Meeting—St. Louis, October 21-22.

Southeastern Allergy Association, Fifty-fourth Annual Meeting—Atlanta Biltmore Hotel, Atlanta, October 21-22.

Southern Chapter, American College of Chest Physicians, Seventeenth Annual Meeting—Statler-Hilton Hotel, St. Louis, October 30-31.

Southern Medical Association, Annual Meeting—St. Louis, October 31-November 3.

Sixty-seventh Annual Convention of Military Surgeons—Washington, D. C., October 31-November 2.

American Medical Writers' Association—Morrison Hotel, Chicago, November 18-19.

Southeastern Region of the College of American Pathologists and the Virginia Society of Pathologists: Seminar on Kidney Diseases—John Marshall Hotel, Richmond, Virginia, November 25-26.

Emory University Postgraduate Course in Ophthalmic Surgery—Grady Memorial Hospital, Atlanta, December 1-2.

New Members of the State Society

The following physicians joined the Medical Society of the State of North Carolina during the month of August, 1960:

Dr. Claudia Gertrude Oxner, St. Joseph's Hospital, Asheville; Dr. Luman Harris Tenney, Route 1, Arden; Dr. John Thomas Dayton, 3800 N. Independence Blvd., Charlotte 5; Dr. Charles Otis Chrysler, 3800 N. Independence Blvd., Charlotte; Dr. William Joseph Callison, 108 Doctors Building, Asheville; Dr. Robert Earl Nolan, O'Hanlon Building, Winston-Salem; Dr. Henning Frederick Adickes, Jr., 2832 Selwyn Avenue, Charlotte; Dr. Julian Barker, 1012 Kings Drive, Charlotte; Dr. Hugh Harrison Hayes, Jr., 3212 Country Club Drive, Charlotte; Dr. William Malcolm Eubanks, Jr., 4200 Park Road, Charlotte; Dr. Cecil Lawrence Johnston, 1616 Palm St., Goldsboro.

News Notes from the Bowman Gray School of Medicine

Dr. Isadore Meschan, professor of radiology and chairman of the Department of Radiology, has been awarded a cancer related research training grant (radiation biology) by the National Cancer Institute of the National Institutes of Health. The grant is in the amount of $365,000 for a period of three years and nine months.

The training program will be sponsored through the Department of Radiology, and will be under the direction of Dr. Donald J. Pizzarello. The program was activated on September 1, 1960, and it is anticipated that the first trainees will be appointed for a January term.

In addition to his duties as director of the radiation biology training program, Dr. Pizzarello will also serve as a member of the teaching staff. He holds the bachelor of arts, master of science and doctor of philosophy degrees from Fordham University, New York City. For the past year he has been a research fellow at the Argonne National Laboratory, Division of Biological and Medical Research, Argonne, Illinois.

* * *

In addition, 14 research grants from the U. S. Public Health Service, totaling $266,453 for the coming year, were awarded to the Bowman Gray School of Medicine during the month of August. Among the largest was a $50,000 award to Dr. Richard L. Burt for "Studies on Carbohydrate Metabolism in Pregnancy" and $43,025 to Dr. Norman M. Sulkin for "Ultrastructure of Nerve Cells in Experimental Aging." In the latter grant, funds are approved for the purchase of an electron microscope. Dr. Robert W. Prichard and Dr. Martin G. Netsky were awarded $29,440 for "Studies on Spontaneous Atherosclerosis," and Dr. Harold D. Green received approval of a grant for "Inter-relation of Venous Return and Vasomotor Tone."

* * *

Dr. Eben Alexander, Jr., professor of neurosurgery, has been appointed to the editorial board of the **Journal of Neurosurgery**. The appointment is effective January 1, 1961.

* * *

Dr. Walter J. Bo, a native of Minnesota, has joined the faculty as associate professor of anatomy. Previously, Dr. Bo was associate professor of anatomy at the University of North Dakota School of Medicine at Grand Forks, North Dakota.

A graduate of Marquette University, Dr. Bo also received a master of science degree in zoology from that school. He holds a doctor of philosophy degree from the University of Cincinnati School of Medicine Graduate School.

He has been an instructor in zoology at Xavier University at Cincinnati, a teaching fellow in histology at the University of Cincinnati, a cancer research fellow at the University of Cincinnati, and assistant professor of anatomy at the University of North Dakota Medical School.

* * *

Dr. Alanson Hinman, assistant professor of pediatric enurology, has returned from a three year leave of absence. During his leave, Dr. Hinman served as a special clinical trainee in neurology at Columbia University, College of Physicians and Surgeons, New York City.

* * *

Dr. Richard C. Proctor, associate professor of psychiatry, has been named chairman of the Department of Psychiatry.

Dr. Angus Randolph, associate professor of psychiatry, has served as acting chairman of the department since 1956. He will continue as a member of the full-time faculty.

Dr. Proctor graduated from Wake Forest College in 1942 and from Bowman Gray School of Medicine in 1945. He served an internship and residency at the U. S. Naval Hospital, Bremerton,

Washington; the N. S. Naval Hospital, Great Lakes, Illinois; and at Graylyn. He joined the Bowman Gray faculty in July, 1950.

He has served as secretary-treasurer of the Southern Psychiatric Association and president of the Day Care Nursing Association. He is a member of the American Psychiatric Association, the North Carolina Medical Society, the Forsyth County Medical Society, the Southern Medical Association, and the Tri-State Medical Society.

From 1950 to 1952, Dr. Proctor served as assistant director of Graylyn. In January, 1959, he moved his office from Graylyn to the Bowman Gray School of Medicine, where he continues as a full-time member of the faculty.

* * *

Dr. James B. Wray, instructor in orthopaedics, will assume his new duties as chairman of the Section on Orthopaedics at the State Medical University of New York, Upstate Medical Center, Syracuse, New York, on October 1, 1960.

Dr. Wray has served as a member of the Bowman Gray faculty since July, 1957.

News Notes from the Duke University Medical Center

As announced earlier, the Duke University Medical School is sponsoring a postgraduate Medical Seminar Cruise to the West Indies this fall aboard the new Kungsholm, Sweden's largest transatlantic liner and cruise ship. The luxury ship, which will sail from New York City on November 9, will visit the Virgin Islands and San Juan, Puerto Rico, and will return to New York on November 18.

Shipboard lectures on various subjects in medicine, pediatrics and surgery will be given by the following members of the Duke Medical School faculty: Dr. Edwin P. Alyea, professor of urology; Dr. Doris Ahlee Howell, associate professor of pediatrics and pediatric hematologist; Dr. William M. Nicholson, professor of medicine and assistant dean for Postgraduate Medical Education; Dr. Elbert L. Persons, professor of medicine; and Dr. William M. Shingleton, professor of surgery.

The instructional program will provide 20 hours credit toward postgraduate requirements of the American Academy of General Practice. While designed primarily for the generalist, the program should be of value and interest to the specialist. Informal panel discussions, clinicopathologic conferences, and formal presentations will be given by members of the faculty.

* * *

A Duke University medical scientists is approaching the study of strokes through observation of blood vessels inside the eyeball.

Dr. Albert Heyman, working under a $2,000 grant from the Wilson County Heart Association, is utilizing new techniques for diagnosing abnormalities in the brain's circulatory system and also for gaining more information about strokes. He plans to study the retinal blood vessels by photographing them with specially adapted "eye ground" cameras, by making motion pictures, and by measuring blood pressure inside these vessels.

Dr. Heyman is an associate professor of medicine at the Duke Medical Center. Working with him in the research project is Dr. Regina Frayser, instructor in medicine. They will be assisted by photographers in the medical illustration departments of Duke Hospital and the Veterans Administration Hospital here.

* * *

A new radiation therapy and research division has just been completed at the Duke University Medical Center and is now in use.

Providing extensive facilities for radiation treatment of cancer, the division is housed in a $375,000 addition to Duke Hospital that has been under construction for the past year.

A "cobalt 60" therapy unit, one of several in North Carolina, provides radiation dosage equivalent to that of a three million volt x-ray machine for treatment of deep-seated cancer.

A "cesium 137" unit represents the latest development in supervoltage radiation therapy equipment. Small and compact, this unit produces a beam similar in many ways to that of a one million volt x-ray machine requiring a two-story space for installation. The cesium unit is one of a few now in use in the United States.

An appointment and a promotion in the administrative staff of Duke Hospital were announced recently by Charles H. Frenzel, hospital superintendent.

James W. Anderson has joined the staff as business officer, succeeding Leonard E. Small.

John A. Salmon, Jr., has been promoted from assistant collections officer to admitting officer, succeeding Mrs. Elizabeth Hendricks.

* * *

A six-year research project aimed at producing better nurses has been initiated at Duke University. The study is being conducted jointly by the University's Department of Sociology and Anthropology and the School of Nursing.

Dr. John C. McKinney, sociology, department chairman and principal investigator for the project, said that "in effect, we are studying the formation of nursing students' professional goals and attitudes during the course of their education."

News Notes from the University of North Carolina School of Medicine

North Carolina Memorial Hospital of the University of North Carolina received its one hundred thousandth patient recently.

The number 100,000 was marked by the name of Mrs. Katie B. Koch of Bailey, a Nash County community. Mrs. Koch, a housewife, was treated in the Out-patient Clinic of the hospital.

From a few hundred patients seen in this clinic the year the hospital opened—1952—the number

during the past 12 months has grown to nearly 60,000.

The hospital observed the eighth anniversary of its opening on September 2.

* * *

Dr. Charles H. Burnett, head of the Department of Medicine, has been granted a year's leave of absence for research work at the University of London. During his absence, the department will be headed by Dr. Louis G. Welt, professor of medicine.

* * *

Dr. Robert R. Cadmus, director, and E. B. Crawford, Jr., assistant director of North Carolina Memorial Hospital, flew to Panama City, Panama, recently for consultation with officials of a new hospital under construction there.

Memorial Hospital has had a contract to assist the Panamanian hospital since the project first got underway about two years ago. The new hospital is expected to open in a year.

* * *

Experiments have been conducted with a new instrument at the University of North Carolina School of Medicine which has successfully measured the oxygen in the brain of a living animal.

The project was carried out by three anesthesiologists of the Department of Surgery. Dr. Kenneth Sugioka was the principal investigator. He was assisted by Drs. David Davis and Rodney McKnight.

An account of this research was given August 24 at the Stanford University Medical Center at Palo Alto, California, before the annual meeting of the American Physiological Society.

Prior to the development of this instrument, exact measurement of oxygen in tissue had not been possible.

* * *

Dr. Charles E. Flowers, Jr., associate professor of obstetrics and gynecology, went to the University of California recently to establish a special study of "Diabetes in Pregnancy" for the American Medical Association.

* * *

A $2 million request to help launch construction of a long range health center addition at North Carolina Memorial Hospital was included in the university's $15.3 million capital improvements budget request presented recently to the state's Advisory Budget Commission.

Also included in the total $3,459,000 budget request for the Division of Health Affairs for the coming biennium is a $1,434,000 appropriation to provide complete air conditioning for Memorial Hospital and the School of Dentistry. Another $25,000 is earmarked for renovation of certain areas in the medical school.

The health center addition would be the first stage in a 10-year physical expansion program which might cost upwards of $8 million.

The University of North Carolina is getting a $30,000 gift from the will of Mrs. Elva Bryan McIver of Sanford.

The Council of State has formally accepted a 47-acre tract of land valued at $30,000 which Mrs. McIver willed to be used to establish a loan fund for medical students at the university.

The gift was left in memory of Mrs. McIver's husband, the late Dr. Lynn McIver.

* * *

A new training program for persons engaged in the care of the mentally ill is being organized by the North Carolina State Hospitals Board of Control.

Dr. Charles R. Vernon of the Department of Psychiatry, U.N.C. School of Medicine, has been named director.

* * *

Dr. Kendall Owen Smith, who has made significant contributions to the knowledge of how viruses invade living tissue cells in research utilizing an electron microscope at the U.N.C. School of Medicine, has accepted a position at Baylor University in Houston, Texas.

Dr. Smith, a Ph.D. graduate in bacteriology in the U.N.C. medical school and a native of Wilson, has been since August, 1959, a postdoctorate trainee of the U. S. Public Health Service, working with Dr. Gordon Sharp in the newly established biophysics laboratory in the School of Medicine here. Dr. Smith has worked with Dr. Sharp in experiments using the electron microscope.

At Baylor University, Dr. Smith will work with Dr. Joseph Melnik, and continuation of experiments begun at Chapel Hill will be possible.

* * *

Dr. Richard Dobson, head of the Division of Dermatology, spoke recently before the first International Congress of Histochemistry in Paris, France, on the subject of "The Histochemistry of the Human Sweat Gland."

Dr. Dobson is engaged in various studies of the skin and the sweat glands.

Eleventh Annual Winston-Salem Heart Symposium

The eleventh annual Winston-Salem Heart Symposium will be held at the Robert E. Lee Hotel in Winston-Salem on October 7. The program follows.

Morning

9:30-10:25 Presiding: Robert L. McMillan, M.D. Governor, North Carolina American College of Physicians, Winston-Salem
"Recent Advances In Experimental Atherosclerosis"
Thomas H. Clarkson, D. V. M., Winston-Salem

10:25-11:15 "Human Atherosclerosis and Lipid Metabolism: Current Concepts"
Donald Fredrickson, M.D., Bethesda, Maryland

11:30 A.M.-1:00 P.M. **Panel**
"Clinical Management of Atherosclerosis"
Diet, Cholestorol-lowering Drugs, Anti-coagulant, Surgery
Moderator: Robert W. Prichard, M.D., Winston-Salem
Participants: Edward S. Orgain, M.D., Durham
Henry T. Bahnson, M.D., Baltimore, Maryland
Donald Fredrickson, M.D., Bethesda, Maryland

1:00 P.M. **Lunch**

Afternoon

2:00- 2:50 Presiding: Charles R. Welfare, M.D., Winston-Salem, President, Forsyth County Medical Society
"Treatment of Hypertensive Vascular Disease"
Edward S. Orgain, M.D., Durham

2:50- 3:40 "Surgical Management of Vascular Occlusive Disease" With Special Comments on Treatment of Carotid Obstructive Syndromes.
Henry T. Bahnson, M.D.

3:50- 4:40 "External Cardiac Resuscitation" A New Technique of Cardiac Massage Without Opening the Chest.
James R. Jude, M.D., Baltimore, Maryland

4:40- 5:40 P.M. Clinico-Pathological Conference
Edward S. Orgain, M.D.

6:00- 7:00 **Social Hour**

7:00 **Dinner**
Presiding: Mr. James A. Way, President, Forsyth County Heart Association, Winston-Salem
Speaker: Dr. Mark Depp, Pastor, Centenary Methodist Church, Winston-Salem
Introductions: Benjamin F. Huntley, M.D., Chairman, Heart Symposium, Winston-Salem

Seminar on Athletic Injuries

The University of North Carolina School of Medicine, in cooperation with the North Carolina High School Athletic Association and the North Carolina Committee on Trauma of the American College of Surgeons, co-sponsored a one-day seminar on "The Prevention and Management of Athletic Injuries" at North Carolina Memorial Hospital on September 21.

Guest member of the seminar faculty was Dr. Charles J. Frankel of the Department of Orthopedic Surgery and athletic team physician of the University of Viriginia. Dr. William P. Richardson, assistant dean for continuation education presided.

North Carolina Heart Association

Dr. Eugene A. Stead, Jr., professor and chairman of Medicine at Duke, will deliver the Lewis A. Conner Memorial Lecture at the opening Scientific Session of the American Heart Association's annual meeting in St. Louis on October 21. His topic is "Physiology of the Circulation as Viewed by the Internist." The remainder of this session will be conducted jointly by the American Heart Council on Clinical Cardiology and the American College of Cardiology.

Forms for registering for attendance may now be obtained from the North Carolina Heart Association, Miller Hall, Chapel Hill, North Carolina.

North Carolina Board of Medical Examiners

The North Carolina State Board of Medical Examiners will meet at the Virginia Dare Hotel, Elizabeth City, on October 7, to interview applicants for license by endorsement.

Ninth District Medical Society Symposium

The annual Ninth District Medical Society Symposium will be held at Moose Lodge in Morganton on September 29.

Officers of the Ninth District Society are: president—Dr. G. M. Billings; vice president, Dr. J. B. Helms; secretary-treasurer, Dr. L. B. Snow.

For further information, write, Dr. L. B. Snow, Drawer 150, Morganton, North Carolina.

Edgecombe-Nash Medical Society

The Edgecombe-Nash Medical Society held its monthly meeting in Rocky Mount on August 10. Dr. Raymond Adams of the Department of Neurology, Medical College of Virginia, was guest speaker.

News Notes

Drs. Hall, Lafferty, Coppedge, Burnett, and Roth of Charlotte have announced the association of Dr. Hugh Harrison Hayes, Diplomat of the American Board of Radiology, in the practice of radiology.

* * *

Drs. Paul W. Sanger and Frederick H. Taylor of Charlotte announce the association of Dr. Francis Robicsek in the practice of cardiovascular and thoracic surgery.

Southeastern Rural Health Conference

Physicians and farm group representatives from 11 Southeastern states will gather in Atlanta, October 7-8, for the first regional conference on rural health.

"Joining Hands for Community Health" is the theme of the meeting, which will be held at the Dinkler Plaza Hotel and is sponsored by the

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American Medical Association's Council on Rural Health.

High light of the conference will be a banquet address Friday evening, October 7, by Dr. Julian P. Price, Florence, South Carolina, newly appointed chairman of A.M.A.'s Board of Trustees.

Conference co-chairmen are Drs. Francis T. Holland, Tallahassee, Florida, and W. Wyan Washburn, Boiling Springs, North Carolina.

Southeastern Surgical Congress

The Southeastern Surgical Congress announces a prize award contest open to residents of approved hospitals in the Southeastern states for the best scientific papers submitted.

Papers are due at the Congress office at 340 Boulevard, N.E., Atlanta 12, Georgia, before December 1, 1960.

First prize is an all-expense-paid trip to the meeting at Miami Beach, Florida, March 6-9, 1961, in addition to a cash award.

Emory University School of Medicine

The Department of Ophthalmology, Emory University School of Medicine, will sponsor a postgraduate course in ophthalmic surgery to be held on December 1 and 2, 1960, in the auditorium of the Grady Memorial Hospital, Atlanta, Georgia.

Diagnostic principles and techniques, preoperative and postoperative management, and surgical principles and techniques in extraocular muscle surgery, cataract surgery and glaucoma surgery will be discussed.

American College of Gastroenterology

The twenty-fifth annual convention of the American College of Gastroenterology will be held at the Bellevue-Stratford Hotel in Philadelphia, Pennsylvania on October 24, 25, and 26.

For copies of the program and additional information, please write to the American College of Gastroenterology, 33 West 60th Street, New York 23, New York.

American Board of Obstetrics and Gynecology

The next scheduled examination (Part 1), written, will be held in various cities of the United States, Canada, and military centers outside the Continental United States, on Friday, January 13, 1961.

Reopened candidates are required to submit case reports for review 30 days after notification of eligibility. Scheduled Part 1 and candidates resubmitting case reports are required to submit case reports prior to August 1 each year.

Current Bulletins may be obtained by writing to Dr. Robert L. Faulkner, executive secretary and treasurer, 2105 Adelbert Road, Cleveland 6, Ohio.

American College of Chest Physicians

The Southern Chapter of the American College of Chest Physicians will hold its seventeenth annual meeting at the Statler-Hilton Hotel, St. Louis, Missouri, Ocober 30-31, 1960. All physicians are cordially invited to attend. There is no registration fee.

National Conference on the Medical Aspects of Sports

The Second National Conference on the Medical Aspects of Sports sponsored by the American Medical Association will be held in Washington, D. C., at the Statler Hotel on November 27. The conference will immediately precede the annual Clinical Meeting of the American Medical Association, November 28-December 1, 1960.

As was true of the first meeting on this subject, held last year in Dallas,, the Second Conference will cover a wide range of subjects. Included will be papers, panels, and discussions relating to training and conditioning, prevention of injuries, recognition, referral and treatment of injuries, the psychology of sports participation and other subjects.

Those interested in receiving announcements concerning the conference should address The Secretary, Committee on the Medical Aspects of Sports, American Medical Association, 535 North Dearborn, Chicago 10, Illinois.

Guild of Prescription Opticians of America, Inc.

Dr. William R. Harris of Henderson, North Carolina is among six new residents in ophthalmology who have been announced as the 1960 winners of fellowships provided by the Ophthalmology Scholarship Fund of the Guild of Prescription Opticians of America, Inc. Dr. Harris will serve his residency at the Ohio State University Hospital, Columbus, Ohio.

American Medical Writers Association

Because of a conflict with observance of Yom Kippur on October 1, the American Medical Writers' Association has changed the dates of its seventeenth annual meeting to November 18 and 19, 1960, Dr. Austin Smith, president of the society, has announced. The meeting will be held at the Morrison Hotel in Chicago.

The National Foundation

Postdoctoral fellowships are offered by the National Foundation to candidates for training in research, orthopedics, preventive medicine, arthritis and related diseases, and rehabilitation. The closing date for submitting applications to be reviewed in February is November 1.

Catholic Hospital Association

The new Catholic Hospital Association publication on the care of the aged, "The Administration of Long-Term Care Facilities," is now available.

Sixteen recognized authorities in the field of geriatric care present material relating to the various aspects of care for the aged in an institutional setting. The papers also deal with problems of administration in such facilities.

Price of the new publication is $1.50 each. Quantity prices are available on request from the Publications Department, Catholic Hospital Association, 1438 South Grand Boulevard, St. Louis 4, Missouri.

Society of Nuclear Medicine

The Society of Nuclear Medicine recently concluded its seventh annual meeting in Estes Park, Colorado. The following officers were elected:

President: Titus C. Evans, Ph.D., Iowa City, Iowa
President-elect: Lindon Seed, M.D., Chicago, Illinois
Vice President: Paul Meadows, M.D., Pittsburgh, Pennsylvania
Vice President-Elect: J. R. Maxfield, Jr., M.D., Dallas, Texas
Secretary: Robert W. Lackey, M.D., Denver, Colorado
Treasurer: William H. Beierwaltes, M.D., Ann Arbor, Michigan

The eighth Annual Meeting of the Society of Nuclear Medicine will be held at the Penn Sheraton Hotel, Pittsburgh, Pennsylvania, June 14-17, 1961.

For further information, address all inquiries to the Administrator, Society of Nuclear Medicine, 430 N. Michigan Avenue, Chicago 11, Illinois.

Animal Care Panel

Unusual new techniques for handling animals used in scientific research will high-light the eleventh annual meeting of the Animal Care Panel to be held in St. Louis, October 26-28. The success with hypnotism of small animal subjects will be one of the newer innovations to be reviewed.

Currently there are slightly more than 800 members in the Animal Care Panel. They include medical scientists, veterinarians, and caretakers, breeders and dealers of animals.

United States Civil Service Commission

At least 1,450,000 employees have enrolled in the federal employees health benefits program according to preliminary and incomplete registration figures received from 35 of the 38 carriers of participating health benefit plans, the Civil Service Commission announced recently. The new program went into effect early in July.

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U. S. Department of Health, Education, and Welfare

The cooperation of physicians is requested in studies on colon and rectal carcinoma recently initiated at the Clinical Center, National Institutes of Health, Bethesda, Maryland. Encouraging results in the treatment of gastrointestinal carcinoma have been reported using the pyrimidine analogues 5-fluorouracil and 5-fluorodeoxyuridine. However, other reports have raised the question of their effectiveness.

The Chemotherapy Service of the National Cancer Institute is conducting studies of these agents in carcinoma of the colon and rectum in order to better define their place in the treatment of metastatic gastrointestinal neoplasm.

Patients can be accepted for these studies if they are ambulatory, have normal leukocyte count, renal and hepatic function and if they have metastases in the lung, peripheral lymph nodes (such as supraclavicular or cervical) or skin.

Referrals of such patients will be greatly appreciated. Physicians who wish to have their patients considered for study at the National Cancer Institute may write or call: Dr. Clyde O. Brindley, or Dr. Paul P. Carbone, National Cancer Institute, Bethesda 14, Maryland.

* * *

A National Center for Health Statistics has been established in the Public Health Service, the Surgeon General, Dr. Leroy E. Burney, has announced.

The new organizational unit brings together the major PHS activities concerned with measurement of the health status of the nation and identification of significant associations between characteristics of the population and health-related problems.

Initially it will have two divisions: the U. S. National Health Survey, which was transferred to it on August 15; and the National Office of Vital Statistics, which will become part of it on October 1. It will supplement but not supplant the statistical work associated with particular Public Health Service programs, and which will continue as integral parts of those programs.

* * *

Sister Hilary Ross, a biochemist, internationally known for her laboratory research on leprosy, was honored last month by Surgeon General Leroy E. Burney of the Public Health Service on the occasion of her retirement after 37 years of duty at the national leprosarium, officially the U. S. Public Health Service Hospital, Carville, Louisiana.

Dr. Burney will present to Sister Hilary a certificate citing her for outstanding contribution to the care and welfare of patients with leprosy and for dedicated effort in developing and communicating new knowledge on this disease.



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1. Walker, R. S.: Brit. M. J. 2:405, 1959.
2. Odell, W. D., et al.: A.M.A. Arch. Int. Med. 102:520, 1958.
3. Pearlman, W.: Phenformin Symposium, Houston, Feb. 1959.
4. DeLawter, D. E., et al.: J.A.M.A. 171:1786 (Nov. 28) 1959.
5. McKendry, J. B., et al.: Canad. M. A. J. 80:773, 1959.
6. Miller, E. C.: Phenformin Symposium, Houston, Feb. 1959.
7. Krall, L. P.: Applied Therapeutics 2:137, 1960.

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Veterans Administration

A search for some of the basic defects that occur in the brain in Parkinson's disease, a condition afflicting an estimated 500,000 older persons in the United States, is under way at the Durham, North Carolina, Veterans Administration hospital.

A medical team under leadership of Dr. Blaine S. Nashold, Jr., a neurosurgeon, is investigating the effects of drugs in a selected group of patients, in the hope that findings will lead to development of new and improved treatment methods for the disease.

* * *

Appointment of Dr. Robert C. Parkin of Madison, Wisconsin, as chief of professional training services in medical education for the Veterans Administration, in Washington, D. C., was announced by the agency recently.

In his new post, Dr. Parkin will help coordinate VA medical education programs which assist in training one out of each three new physicians and one out of each 10 professional nurses being produced by the nation.

New Film Shows Detection Techniques for Cancer

A 16-mm., black-and-white movie showing detection techniques for cancer, which kills more than 250,000 persons in the United States every year, is being offered by Eli Lilly and Company for viewing by qualified professional groups.

Entitled "The Cancer Detection Examination," the forty-six-minute, sound film demonstrates presymptomatic detection of cancer through a simple thirty to forty-minute procedure in the doctor's office.

The material is being offered by Lilly as a free service to physicians.

Lilly salesmen may be contacted by groups of physicians for complete information.

The president of a small drug making company declared recently that "the balance on the pharmaceutical industry's ledgers looms more largely in the public eye than the physiologic wonders our products work and for which mankind has waited since time began."

Speaking to the annual meeting of the Pharmaceutical Manufacturers Association, William C. Conner of Alcon Laboratories, Ft. Worth, Texas, told the prescription drug makers they "no longer toil in blissful anonymity."

He said, "whatever further action—on the legislative scene or elsewhere—comes out of the investigation, the smaller segments of this competitive, free-enterprise industry stand to suffer at least as much as the larger segments."

Conner pointed out that nearly a third of the companies in the PMA membership do an annual business of less than $1 million.

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By activating fibrinolytic factors VARIDASE shortens the *undesirable phase*, limits necrotic changes due to inflammatory infiltration, and initiates the constructive phase to speed total remission. Medication and body defenses can readily penetrate to the affected site; local tissue is prepared for faster regrowth of cells. In infection, the fibrin wall is breached while the infection-limiting effect is retained. In acute cases, response is often dramatic. In chronic cases, VARIDASE Buccal Tablets can stimulate a successful response to primary therapy previously considered inadequate or failing.

for routine use in injury and infection
...new simple buccal route

VARIDASE Buccal Tablets should be retained in the buccal pouch until dissolved. For maximum absorption, patient should delay swallowing saliva.

Dosage: One tablet four times daily usually for five days. When infection is present, VARIDASE Buccal Tablets should be given in conjunction with ACHROMYCIN® V Tetracycline with Citric Acid.

Each VARIDASE Buccal Tablet contains: 10,000 Units Streptokinase and 2,500 Units Streptodornase.

Supplied: boxes of 24 and 100 tablets.

1. Innerfield, I.: Clinical report cited with permission
2. Clinical report cited with permission

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY
Pearl River, New York

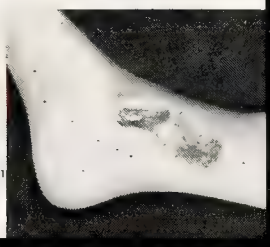


FORCE INJURY
severe bruises ... swelling ... cleared by fifth day[2]





VARICOSE ULCER
15 years duration ... resolved with VARIDASE[1]



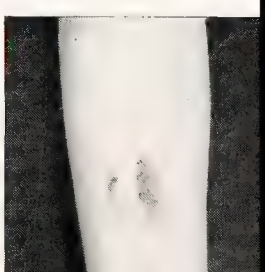


INFLAMMATORY DERMATOSIS
rapidly spreading rhus dermatitis healed within a week[1]





INFECTED LACERATION
marked reversal in 3 days... returned to school... closure advanced[1]





THROMBOPHLEBITIS
back on his feet in a week after recurrent episode[1]





REFRACTORY CELLULITIS
normal routine resumed after 4 days of VARIDASE[1]



Concerning Your Health and Your Income

A special report to members of the Medical Society of the State of North Carolina on the progress of the Society's Special Group Accident and Health Plan in effect since 1940

PROUDLY WE REPORT 1959

AS OUR MOST SUCCESSFUL YEAR IN SERVING YOUR SOCIETY.

During the year we introduced a NEW and challenging form of disability protection. There has been overwhelming response on the part of the membership.

Participation in this Group Plan continues to grow at a fantastic rate.

1960

is our 20th year of service to the Society. It is our aim to continue to lead the field in providing Society members with disability protection and claim services as modern as tomorrow.

SPECIAL FEATURES ARE:

1. **Up to a possible 7 years for each sickness (no confinement required).**
2. **Pays up to Lifetime for accident.**
3. **New Maximum limit of $650.00 per month income while disabled.**

All **new** applicants, and those now insured, who are under age 55, and in good health, are eligible to apply for the new and extensive protection against sickness and accident.

OPTIONAL HOSPITAL COVERAGE: Members under age 60 in good health may apply for $20.00 daily hospital benefit — Premium $20.00 semi-annually.

Write, or call us collect (Durham 2-5497) for assistance or information.

BENEFITS AND RATES AVAILABLE UNDER NEW PLAN

Accidental Death Coverage	*Dismemberment Loss of Sight, Speech or Hearing	Accident and Sickness Benefits	COST UNTIL AGE 35 Annual Premium	COST UNTIL AGE 35 Semi-Annual Premium	COST FOR AGES 35 TO 7 Annual Premium	COST FOR AGES 35 TO 7 Semi-Annual Premium
5,000	5,000 to 10,000	50.00 Weekly	$ 78.00	$ 39.50	$104.00	$ 52.50
5,000	7,500 to 15,000	75.00 Weekly	114.00	57.50	152.00	76.50
5,000	10,000 to 20,000	100.00 Weekly	150.00	75.50	200.00	100.50
5,000	12,500 to 25,000	125.00 Weekly	186.00	93.50	248.00	124.50
5,000	15,000 to 30,000	150.00 Weekly	222.00	111.50	296.00	148.50

*Amount payable depends upon the nature of the loss as set forth in the policy.

Administered by

J. L. CRUMPTON, State Mgr.
Professional Group Disability Division
Box 147, Durham, N. C.

J. Slade Crumpton, Field Representative

UNDERWRITTEN BY THE COMMERCIAL INSURANCE COMPANY OF NEWARK, N. J.

Originator and pioneer in professional group disability plans.

New Anti-inflammatory Agent Introduced

An oral systemic anti-inflammatory enzyme tablet formulated especially for intestinal absorption has been introduced by Armour Pharmaceutical Company.

Named Chymoral, the product is indicated in all conditions where inflammation and swelling are present. Chymoral speeds reduction of hematoma and edema in injuries, reduces pain and speeds wound healing. It may be used in conjunction with other medications.

Clinical investigators reported "good" to "excellent" results in 389 cases out of 478, or 82.5 per cent, when Chymoral was used. Cases included asthma, bronchitis, sinusitis, fractures, contusions, bruises, thrombophlebitis, pelvic inflammation, a number of skin conditions, and such miscellaneous conditions as hemorrhoids, cellulitis and conjunctivitis.

Chymoral is an enteric coated tablet containing both trypsin and chymotrypsin. The product is the newest form of chymotrypsin which is already available in parenteral and buccal form and as an ointment.

A prescription product, Chymoral is supplied in bottles of 48 tablets. The initial dosage is two tablets four times a day, and one tablet four times a day for maintenance. The tablets may be used alone or as a supplement to parenteral Chymar, depending on the severity and duration of the inflammatory condition.

Compliments of

Wachtel's, Inc.

SURGICAL SUPPLIES

65 Haywood Street

ASHEVILLE, North Carolina

P. O. Box 1716 Telephone 3-7616—3-7617

BOOK REVIEWS

Manual for Examination of Patients. By Kenneth L. White, M.D., and others. 231 pages. Price, $4.50. Chicago: The Year Book Publishers, 1960.

This manual, put together at the University of North Carolina School of Medicine for the benefit of students, proved so satisfactory that it has now been offered as a handy, paper-backed reference for students elsewhere. As such, it fills a need which has existed for some years. Books on physical diagnosis in general are verbose, redundant, and poorly correlated with pathology, physiology, and laboratory diagnosis. Insufficient attention is usually given to the finer points of history-taking, which have been developed so well by psychiatrists. It is therefore a delight to see Dr. White and his colleagues offer a volume with so rational an approach. The only comparable volume, "Essentials of Diagnostic Examination" by Dr. John B. Youmans, was published in 1940 and has been long out of print.

Some of the manual could have been re-written, particularly certain sections on laboratory procedure. Not all hospitals and medical schools follow the same laboratory procedures as does the University of North Carolina Medical Center. For example, measurement of butanol extractable iodine (BEI) and quantitative urine culture are unfortunately not available at all medical schools. Perhaps the publishers rather than the committee are responsible for this defect, because a little critical reading could have made it apparent. It is a small criticism, however, in light of the generally comprehensive approach offered. The book is heartily recommended for medical students, particularly for those taking physical diagnosis, and for junior students first seeing patients on the ward.

Medicine Today. By Marguerite Clark. 360 pages. Price, $4.95. New York: Funk & Wagnalls Company, 1960.

This book is an excellent summary of the progress made by medicine during the past decade. It is well written, and for the most part gives a reliable account of recent medical discoveries. Cancer, mental disease, arthritis and rheumatism, virus diseases, pediatrics, "women and their ills," and reducing diets are discussed. A chapter is devoted to the achievements of the pharmaceutical industry. The final chapter, which should keep the medical reader humble, is on "Diseases Unconquered."

Its easy, chatty style makes the book easy to read, and it should not frighten the non-medical reader, unless he—or she—is the kind that takes all medical descriptions too seriously. The best chapters are on psychosomatic disorders and on reducing diets.

A few minor criticisms will occur to the medical reader. The discussion of gout is rather sketchy, and the old standby, colchicine is not even mentioned. The undesirable side effects of the steroids might have been stressed more. Designating vaccine as "serum" is a common practice of laymen which is particularly irritating to medical men.

It is unfortunately true, as Mrs. Clark points out, that many unnecessary operations are performed. Her choice of a case report, however, was not convincing evidence. A 25 year old woman operated on for acute appendicitis was found to have a normal appendix, but a ruptured tubal pregnancy. Since the differential diagnosis between the two conditions may be quite difficult, and since a ruptured tubal pregnancy is certainly as grave an emergency as acute appendicitis, no surgeon should need to apologize for having operated.

In spite of these minor criticisms, a doctor can recommend the book to patients who want to keep up to date on medical progress, and most doctors can themselves learn much from it.

Moses Ben Maimon (Maimonides). The Preservation of Youth, translated by Hirsch L. Gordon, M.D., Ph.D., D.H.L., 92 pages. Price, $2.75, Philosophical Library, New York, 1960.

Moses ibn Maimon was a great physician of the 12th century. A Jew of Cordova, and better known as Maimonides, he wrote voluminously. He served as the personal physician to Saladin of the Crusades fame and also to Saladin's son, Sultan Al Afzal. Upon the request of the latter he wrote a collection of essays concerning health, **Fi Tadbir as-Sihha,** and dedicated to Al Afzal.

Dr. Gordon ably translated and edited these essays under the title, "The Preservation of Youth." Very few works of Eastern medical writers of the golden age of Islam are translated fully into English, and this book is a welcome entry.

Maimondes, though born in Spain, was certainly one of the great physicians of the Arab world. He also was a noted Jewish theologian. "From Moses to Moses there was no greater," says a Jewish proverb, meaning from Moses the Prophet to Moses the Maimonides. Nevertheless, the publishers of this book claim that this is "one of the unique medical works of Western culture"..... "translated from the original Arabic"! To this reviewer's knowledge very few, if any, great works of Western culture were written by Eastern authors, and in Arabic.

Maimonides borrowed heavily from great physicians of Islam. This in itself is advantageous to the reader of this book since he can get some insight into the general trend of medical science of the Moslems as it was at the end of the most advanced period. The translator has well captured the literary style of Maimonides and brought into limelight important points. Throughout the book are such remarks as: "Nothing is absolute in medicine: . . . Be optimistic, everything is a matter of probability . . . Urban air is polluted, so live in the country or suburbs . . . Science is complicated, the more we learn the less we know . . . Take a short bath every day . . Use music as a therapeutic adjunct . . ." These remarks seem to be coming out of today's textbooks; however, they were written over eight centuries ago!

It is encouraging to students of the history of medicine, and particularly to students of Islamic medicine, to see the translation of a complete work in this field. Dr. Gordon's translation of Maimonides certainly deserves to be in any physician's library.

Foundation Makes New Health Film

A 22 minute film on preventive medicine has been announced by the Smart Family Foundation, for showings to PTA groups, pediatricians, public health meetings, and in schools.

Entitled "Journey in Health," this 16 mm. sound motion picture stresses the importance of having the family doctor regularly and continually supervice a child's health.

Since "Journey in Health" was prepared as a public service by the Smart Family Foundation, it is available at below-cost price. Prints may be obtained in color for $50; in black-and-white for $10, from the Smart Family Foundation, 65 E. So. Water St., Chicago 1.

Classified Advertisements

X-RAY Equipment for sale or exchange. 100 K.V. 100 M.A. Picker Radiographic unit with manual operated tilt table combined with Fluoroscope unit beneath the table. Provides instant change over from Fluoroscopy to Radiography with spot film device. Has had some use but is in excellent working order also dark room equipment, magnetic type plate changer, Stereoscopic view boxes, etc., will consider late model Ultra-violet lamp, surgical endotherm in exchange. Write Box 790, Raleigh, North Carolina.

AVAILABLE Desirable twelve hundred and fifty square feet space suitable for doctors or dentist. Ground floor Cameron Court apartments, corner Snow and Morgan Streets, Raleigh. Air conditioned, also heat, lights, water and parking. On long lease will improve to suit tenant. Apply A. W. Criddle, Manager, Temple 2-5395.

WANTED Otolaryngologist and or Ophthalmologist for extremely successful Asheville and Western Carolina practice. Dr. Joseph McGowan recently deceased. Fully equipped office, experienced personnel. Contact Mrs. Joseph McGowan, 303 Vanderbilt Road, Asheville, North Carolina.

PRACTICE opportunity. For sale. Complete equipment of successful physician for practice Internal Medicine and offices. Professional Bldg. Raleigh available. Write box 1951, Raleigh.

In Memoriam

Earl W. Brian, M.D.

April 9, 1907—August 1, 1960

Dr. Earl W. Brian, Raleigh physician and a member of the State Board of Health, died at Duke Hospital, Monday, August 1, 1960, at 2:00 A.M. after an illness of several weeks.

He had been admitted to the hospital on July 13, 1960, and had been critically ill since that time. Funeral services were held at the Edenton Street Methodist Church in Raleigh, conducted by Dr. Howard P. Powell, his pastor, and the Rev. R. H. Baum, pastor of Ebenezer Methodist Church.

A native of Arkansas, Dr. Brian received his medical degree at Duke University in 1934. He had practiced medicine in Raleigh since 1939 and was active in professional and civic life and in the Edenton Street Methodist Church of which he was a member. He was a certified member of the American Board of Internal Medicine and had been a member of the Wake County and the Medical Society of the State of North Carolina since 1939.

In 1958, Dr. Brian was elected to membership on the State Board of Health by the Medical Society of North Carolina, and served on this Board until his death.

Dr. Brian was president of the Wake County Medical Society for the year 1956-57, president of the Raleigh Kiwanis Club in 1953, and president of the Executives Club in 1958. He was selected as Raleigh's "Kiwanian of the Year" in 1957 and was vice president of the United Fund of Raleigh in 1956-1957. At the time of his death, he was a member of the Board of Directors of the Salvation Army and of the Occoneechee Boy Scout Council.

Dr. Brian was instrumental in the organization of the Wake County Cancer Society, was active in the Heart Association, and for 17 years was a member of the board of the Wake County Tuberculosis Association.

He is survived by his wife, the former Blanche Barringer; two daughters, Mrs. Roy Schmichel of Southburg, Connecticut, and Betsy Brian of the home; a son, Earl Brian, Jr., a pre-medical student, who is spending the summer in Germany; and four brothers and four sisters.

James Graham Ramsay, M.D.

On May 7, 1960, the Supreme Architect of the Universe summoned Dr. James Graham Ramsay to his celestial home above, there to receive the reward of a well spent life.

Dr. Ramsay was a member of the medical and surgical staff of Tayloe Hospital prior to its closing and the opening of Beaufort County Hospital in May, 1958, when he joined the staff of the latter, remaining a member until the time of his death. He endeared himself to his associates and all with whom he came in contact.

A dedicated and devoted physician and surgeon has gone, for the moment, from our midst, but we honor his memory today as one who gave his life in service to the profession, and left for us high and lofty ideals, attained only by those who are so dedicated and because of whom the world is blessed.

In his death we are deprived of his genial presence and wise counsel, and this community has lost an able physician and surgeon, as well as a good citizen and friend.

Now therefore be it resolved that to his family and loved ones we express our deep and abiding sympathy in their great loss.

John C. Tayloe
E. W. Larkin
James B. Larkin
Beaufort County Hospital

The Month in Washington

Democrats and Republicans are campaigning on opposing planks on the issue of health care for the aged. The Democratic party advocates the Social Security approach; the Republican party favors federal aid in the field, but outside the Social Security system.

The GOP plank pledged:

"Development of a health program that will provide the aged needing it, on a sound fiscal basis and through a contributory system, protection against burdensome costs of health care. Such a program should:

"—Provide the beneficiaries with the option of purchasing private health insurance—a vital distinction between our approach and Democratic proposals in that it would encourage commercial carriers and voluntary insurance organizations to continue their efforts to develop sound coverage plans for the senior population.

"—Protect the personal relationship of patient and physician.

"—Include state participation."

The key paragraph of the Democratic plank stated:

"The most practicable way to provide health protection for older people is to use the contributory machinery of the Social Security system for insurance covering hospital bills and other high cost medical services. For those relatively few of our older people who have never been eligible for Social Security coverage, we shall pro-

From the Washington Office of the American Medical Association.

vide corresponding benefits by appropriations from the general revenue."

Charles H. Percy, chairman of the GOP Platform Committee, stated that the reference to a "contributory system" in the Republican plank did not mean a Social Security tax.

Presidential and Vice Presidential candidates of both parties went into the election campaigns pledged to support the health-care-for-the-aged planks adopted by their respective conventions. Vice President Richard M. Nixon, the GOP Presidential nominee, already was on record as unalterably opposed to any program of national compulsory health insurance. The long-established position of Senator John F. Kennedy of Massachusetts, the Democratic Presidential candidate, has been "that only by use of the Social Security system can we have true health insurance."

Speaking for the American Medical Association, Dr. Edward R. Annis of Miami, Florida, appeared before the platform-drafting committee of the Democratic convention at Los Angeles, and Dr. Leonard W. Larson, A.M.A. President-elect, before the Republican policy group at Chicago.

The A.M.A. spokesmen warned both parties that a program following the Social Security approach "would be unpredictably costly; it would unnecessarily cover millions of people; it would substitute service benefits for cash benefits; it would lead to poorer — not better — quality of medical care; it would overcrowd our hospitals; it would lead to the decline, if not the demise, of private health insurance; and it would interfere dangerously with the doctor-patient relationship, which is the solid foundation upon which effective medicine must be based."

Dr. Annis also urged support of the House-approved Mills plan to provide health care for the needy aged who need help, with the federal government and the states sharing the costs outside the Social Security mechanism.

In an advertisement run in some large daily newspapers in mid-August, the A.M.A. outlined its reasons for supporting the Mills plan. The ad said, in part:

"The A.M.A. believes our nation, as well as its senior citizens, will best be served by a locally administered health aid program designed TO HELP THOSE WHO NEED HELP . . .

". . . We are equally sincere in our opposition to legislative measures that approach the problem on a shotgun basis—with the idea of increasing repeatedly the Social Security tax in order to finance health benefits for EVERYONE who is covered by the Old Age, Survivors and Disability Insurance program, regardless of their need.

"There are many serious hazards in using the Social Security approach to finance medical and hospital care for our older citizens. When government starts telling the doctor how to practice medicine; telling the nurses how to nurse; telling the hospital how to handle its patients, the quality of medical care is sure to decline. The cost of such a program eventually would be staggering, and would make a serious dent in the pay envelopes of millions of Americans covered by Social Security.

"Most important, perhaps, is the fact that such an approach would just be the beginning of compulsory, government-run medical care for every man, woman and child in the United States. For it wouldn't be long before the Federal Government would be lowering the age at which people would be eligible, and adding one costly services after another to a program that would place your health care under the Federal Government's thumb. And let's not forget that our present health care is recognized to be the world's finest."

Attention Medical Doctors

Our town of 600 pop. and county of 10,000 pop. without a doctor. A ready-made practice will net $25,000 yearly or more. Our needs are great and immediate. Can offer equipped office and/or residence for rent.

If interested, call collect or contact:

Hugh Harris, Ned Delamar, or Hubert Smith

Oriental, North Carolina

(Where hunting, fishing, & boating abound the year around)

1960

TRANSACTIONS

OF THE

AUXILIARY TO THE MEDICAL SOCIETY

OF THE STATE OF NORTH CAROLINA

THIRTY-SEVENTH ANNUAL MEETING

held at

RALEIGH, NORTH CAROLINA

MAY 8-11, 1960

President, Mrs. R. L. Garrard, Greensboro

Recording Secretary, Mrs. H. D. Riddle, Gastonia

Treasurer, Mrs. Ralph Deaton, Jr., Greensboro

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1960-1961

AUXILIARY TO THE MEDICAL SOCIETY of the STATE OF NORTH CAROLINA

Memorial Service, Sunday, May 8, 1960

The Memorial Service of the Auxiliary to the Medical Society of the State of North Carolina was held Sunday, May 8, 1960, together with the Medical Society, in the Elizabeth Room, Sir Walter Hotel, Raleigh. Invocation was given by Dr. Charles H. Pugh, Chairman of the Committee on Necrology, and was followed by the Roll Call of the seventy-nine deceased physician-members of the Society.

With words of tribute, Mrs. William P. Richardson, Chairman of the Memorials Committee of the Auxiliary to the Medical Society, read the list of eight deceased Auxiliary members.

A choral presentation was given by the Rex Hospital Nurses' Choir, under the direction of Dr. Frederick S. Smith, Director of Public School Music, Raleigh City Schools. The program included "Lord's Prayer", "Holy City", "List to the Lark", and "God is Good to All Creation".

Rev. James G. Huggin, pastor of the First Methodist Church, Gastonia, N. C., delivered the Memorial address, which was followed by a Choral Postlude and the Benediction.

Deceased Auxiliary Members—1959-60

Mrs. George W. Brown, Raeford
Mrs. A. C. Bulla, Raleigh
Mrs. J. B. Chandler, Fayetteville
Mrs L. O. Dunlap, Albemarle
Mrs. William M. Jones, Gastonia
Mrs. W. A. Sams, Marshall
Mrs. Will C. Sealy, Durham
Mrs. J. N. Taylor, Greensboro

Mrs. H. D. Riddle
Recording Secretary

Mrs. R. L. Garrard
President
Date: June 3, 1960

Finance Committee Meeting—May 9, 1960

Present: President, President-Elect, First Vice-President, Treasurer, Recording Secretary

The Finance Committee met for coffee and rolls in the President's Suite at 9:15 A.M., May 9, 1960, with Mrs. W. Ralph Deaton, Jr., presiding. Mrs. Deaton presented the Financial Statement, which was accepted, with the addition of notes made on attached mimeographed copy. The Tentative Budget for 1960-61 was accepted with three changes—Publicity was reduced to $5.00, By-Laws increased to $10.00, and Health Careers increased to $60.00 (noted on attached copy). These changes did not affect the balance of the totals.

There was discussion on expenses incurred by the President in connection with the Yearbook, and it was decided that she should be reimbursed.

There being no further business, the meeting was adjourned.

Mrs. H. D. Riddle
Recording Secretary

Mrs. R. L. Garrard
President
Date: June 3, 1960

Executive Committee Meeting—May 9, 1960

Present: President, President-Elect, Treasurer, 1st Vice-President, Parliamentarian, 2nd Vice-President, Recording Secretary.

The Executive Committee met in the President's suite, Sir Walter Hotel, at 10:00 A.M., with Mrs. R. L. Garrard presiding.

Mrs. Paul W. Johnson, First Vice-President, asked to bring a recommendation to the Board of Directors for approval:

"As 1st Vice-President in charge of Membership and Organization, I would like to emphasize the importance of this assignment. Increasing membership is vital to the strength of the Auxiliary, and learning more about the membership and various problems is a challenge. Much thougnt and imagination are required in fulfilling the functions of the 1st Vice-President. It has become increasingly evident that our officer alignment or "Chain of Command" should be made to conform with our National Auxiliary, namely the 1st Vice-President is an **elected officer**, frequently succeeding as President-Elect and President. Thus the duties of 1st Vice-President could be a forerunner to the office of President. In our State Aux. this office is automatically filled by the out-going President. It is obvious that a thorough knowledge of Membership and Organization would render a President much more effective in her service to the Auxiliary, and she would find this experience more helpful **before** her term as president than **after** it. THEREFORE, as immediate Past-President, I recommend that the 1st Vice-President in charge of Membership and Organization become a duly nominated and elected officer each year. This will necessitate a change in the By-Laws, Article 5, Section 2."

(Further) If the 1st Vice-President is to become an Elected Officer, then we should consider that the out-going President become a **Director**, serving for one year, and she will have full responsibility for preparing Report Forms for the use of Committee Chairmen. These forms are to be prepared and presented the State President for inclusion in the Packets at the Fall Board Meeting. This would eliminate confusion ,incomplete or inadequate report forms, and will make our National reporting much easier.

After discussion and ruling by the Parliamentarian, it was decided that this could only be presented in the form of a suggestion, to allow the lapse of sufficient time before being voted upon.

There being no further business, the meeting was adjourned.

Mrs. H. D. Riddle
Recording Secretary

Mrs. R. L. Garrard
President
Date: June 3, 1960

Board of Directors' Annual Meeting—May 9, 1960

The 37th Annual Meeting of the Board of Directors of the Auxiliary to the Medical Society of the State of North Carolina was called to order by president, Mrs. R. L. Garrard, at 11:A.M., in the Hayes-Barton Room, Sir Walter Hotel, Raleigh. Following the invocation by Mrs. Tolbert Wilkinson, a motion was made, seconded and passed to dispense with the roll call and reading of the minutes.

Mrs. Garrard introduced Mrs. John M. Chenault, president of the Auxiliary to the Southern Medical Association, and Mrs. Frank Gastineau, president of the Auxiliary to the American Medical Association.

After a few announcements and expressions of appreciation, Mrs. Garrard reported that Dr. Ros-

coe McMillan, Chairman of the Advisory Committee of the State Medical Society, would not be with us at that time, due to a conflicting meeting, but would be present later. Dr. John C. Reece, President of the Medical Society, was also unable to be present, but sent greetings in the form of a letter, which was read by the Recording Secretary. (attached)

Supplemental Reports, bringing the work of the Auxiliary up to May 1, were distributed.

Mrs. Paul P. McCain, Chairman of Past Presidents, introduced the past presidents, of whom 14 were present as follows:

Mrs. Benjamin J. Lawrence, Raleigh
Mrs. A. Byron Holmes, Fairmont
Mrs. William P. Knight, Greensboro
Mrs. Charles P. Eldridge, Raleigh
Mrs. Sidney Smith, Raleigh
Mrs. Karl B. Pace, Greenville
Mrs. W. Reece Berryhill, Chapel Hill
Mrs. Watson B. Roberts, Durham
Mrs. Roscoe D. McMillan, Red Spring
Mrs. Powell G. Fox, Raleigh
Mrs. R. B. Croom, Jr., Maxton
Mrs. Donnie M. Royal, Salemburg
Mrs. Paul W. Johnson, Winston-Salem
Mrs. Gilbert M. Billings, Morganton

Mrs. McCain also reported that she and the other past presidents usually have lunch together, and that they have among themselves a floating fund which is sent to various places, wherever needed. Last year it was $150.00, and at present is at the UNC Medical School.

1ST VICE-PRESIDENT—Mrs. Paul W. Johnson introduced the District Councilors, of whom four were present, one being a substitute. She then asked everyone to look at page 17 of the Annual Reports, and give close attention to her suggestion there. The Recording Secretary was asked to read the following addendum in connection with this:

"If the 1st Vice-President is to become an Elected Officer, then we should consider that the out-going President become a **Director,** serving for one year, and she will have full responsibility for preparing Report Forms for the use of Committee Chairmen. These forms are to be prepared and presented to the State President for inclusion in the Packets at the Fall Board Meeting. This would eliminate confusion, incomplete or inadequate report forms, and will make our National reporting much easier."

The President asked that we give this careful consideration, saying that it will come up as a recommendation next fall at the Board Meeting.

At this time, Mrs. McCain suggested that the wife of the President of the Medical Society should be made an honorary member of the Board of Directors, so that at future meetings when the President cannot attend personally, his wife can bring his greetings. She pointed out that such a move would make for a more personal relationship between the Medical Society President and our Board of Directors. This suggestion will also come up as a motion at the Fall Board Meeting.

2ND VICE-PRESIDENT—Mrs. Charles D. Thomas, introduced the Chairmen of the Sanatoria Bed Funds, and called attention to the fact that these funds had been started at the suggestion of Mrs. McCain.

TREASURER—Mrs. W. Ralph Deaton, Jr., passed out copies of the Financial Statement, and the Tentative Budget for 1960-61. She called attention to the amount for the Yoder Bed, which might seem unduly high compared to the others, and explained that the Cooper Bed patient had been transferred to the Yoder Bed for surgery, and that the Cooper Bed would remain empty till this patient returned to it. The Treasurer's report and tentative budget were accepted and placed on file.

Other officers present were recognized.

Committee Chairmen

AMEF Chairman, Mrs. Bruce B. Blackmon, made a correction in the Supplemental Report, stating that contributions totalled $1944.25 instead of $2108.25.

"Auxiliary News" Chairman, Mrs. Walter G. King, was absent, but the President pointed out that the "News" is now being used as a means of communication and education as well as news, and expressed hope that the group at large approved and appreciated this. This Chairman plans to move up the deadline for "News" reports to the 10th instead of the 15th, of June, September, December, and March.

Awards Chairman, Mrs. Powell G. Fox, had no announcements at this time.

Civil Defense Chairman, Mrs. Amos N. Johnson, noted one addition to the supplemental report, page 3—that Cumberland County Aux. had taken First Aid and Nursing courses.

Community Health Chairman, Mrs. Robert N. Creadick, was absent, but sent a suggestion through Mrs. Hitch that the committees of Community Health and Community Service might well be combined. This will come up for consideration later, after due study.

Legislation Chairman, Mrs. W. Jack Hunt, expressed great appreciation for the work done this year, work that she considered outstanding.

Memorials Chairman, Mrs. W. P. Richardson, reported the deaths of eight members during the year.

Paramedical Careers Recruitment Chairman, Mrs. A. J. Crutchifeld, reminded us that this committee's name will probably be changed to Health Careers. This will come up at the National meeting for decision, and we will conform to the National designation.

Program Committee Chairman, Mrs. D. S. Currie, Jr., had no report except to say that there will be a change in report forms next year.

S.A.M.A. Chairman, Mrs. W. Reece Berryhill, reported that the two main active areas in this field are Forsyth-Stokes and Durham-Orange, and the one officially affiliated group at this time is at Duke.

Today's Health Chairman was absent, but Mrs. Garrard reported that we had at least 450 subscriptions above those reported before Project 60 was announced, and more were expected. At this point, Mrs. Gastineau discussed Project 60 briefly, saying that the national organization was very grateful for these extra subscriptions, and that she thought probably N. C. did best of all in this.

Representatives to other state organizations were recognized.

Nominating Committee for 1960-61, in accordance to the By-Laws, was appointed as follows:

1. Mrs. R. L. Garrard, 8th District
2. Mrs. Lenox Baker, 6th Distict
3. Mrs. Baxter Troutman, 9th District
4. Mrs. Eugene Clayton, 10th District
5. Mrs. W. E. Keiter, 2nd District

and two alternates:

1. Mrs. Phil Barringer, 7th District
2. Mrs. Donnie Royal, 3rd District

Old Business

Mrs. Garrard commented on the five Recommendations, made and passed at the Fall Board Meeting, which will be presented to House of Delegates.

New Business

The President reminded us of the Nominating Committee changes, published in the Auxiliary News, and had this read in full by By-Laws Committee Chairman, Mrs. Tolbert Wilkinson. (attached) A motion was made, seconded and passed, to adopt these changes.

Mental Health Chairman, Mrs. A. M. Lang, was asked to read the following recommendation approved at the Fall Board Meeting:

"The Mental Health Committee, as authorized by the Board at the Fall Board Meeting on September 9, has been working through the details of setting up a new Mental Health Project for the Auxiliary. We are prepared at this time to make the following recommendations:

"That the Auxiliary to the Medical Society of the State of North Carolina set up an Endowment Fund in the minimum amount of $10,000, the proceeds of which are to be used by the Psychiatric Department of Memorial Hospital, University of North Carolina, for research and training purposes. The money is to be disbursed by the Treasurer annually, and is to be used at the discretion of the Director of the Department of Psychiatry for any needed purpose in the field of research, in the training of psychiatric personnel, or in the care of patients maintained in the hospital for training and research purposes. The Auxiliary does not wish to dictate how this money will be used, but will wish to have an annual report on how the money has been spent. It will take several years to build up sufficient funds to be of much value, and it is understood that the Auxiliary's financial contribution may be added to existing funds for research or training projects.

"A Chairman is to be appointed to handle this new Mental Health Endowment Fund, and she will work under the 2nd Vice-President (Chairman of Activities). An amendment to the By-Laws, Article VI, Section 4 and Article VIII, Section 3(b) and Section 4, will be necessary. Additions will be required to Article XI and Article XIV, Section 3.

"It is noted that there is a very urgent need for funds such as the new Mental Health Endowment Fund would provide. The assistance of the Auxiliary has been requested, the Advisory Committee of the State Medical Society has expressed its wholehearted support. It is further noted that the Yoder Bed Endowment Fund is essentially completed, and the Auxiliary is ready to undertake a new long-term project."

The name of the fund shall be the Auxiliary to the N. C. Medical Society Mental Research Fund."

The motion, formed from the first sentence, second paragraph of above quote, was made, seconded, and passed.

At this point, Mrs. W. Jack Hunt, Legislation Chairman, requested the floor, to express her personal appreciation and pleasure in working this year with our wonderful President, Mrs. Garrard. This was soundly appoved by the group with great applause.

Mrs. Garrard then introduced Mrs. Frank Gastineau, President, Auxiliary to the American Medical Association. Mrs. Gastineau said that she picked N. C. to visit because she wanted to pay tribute to the Auxiliary that was the "best organized in the United States". She pointed out that we have 80% of potential membership, and Arkansas is the only other state that has as much, but it is much smaller. Among other things, she emphasized that the main thing we MUST do is to keep up with current legislation, and that we must try to reverse the trend of reckless government spending, and the gradual limiting of our freedoms.

After her inspiring message, the meeting was adjourned.

Mrs. H. D. Riddle
Recording Secretary

Mrs. R. L. Garrard
President
Date: June 3, 1960

House of Delegates Annual Meeting—May 10, 1960

The 37th Annual Meeting of the House of Delegates of the Auxiliary to the Medical Society of the State of North Carolina met in the Virginia Dare Room at the Hotel Sir Walter, Tuesday, May 10, 1960, at 9:00 A.M. Mrs. R. L. Garrard, President, called the meeting to order, and the invocation was given by Mrs. William P. Richardson. A motion was made, seconded, and passed, to dispense with the Roll Call and the reading of the Minutes.

The Convention Chairman, Mrs. Paul E. Simpson, welcomed the group to Raleigh, asked us to please check programs again to be sure about the bus schedules for lunch and the tea, and reminded us that the hour for the Banquet was to be 6:30 promptly.

Mrs. Garrard expressed appreciation to Mrs. Simpson and her Convention hostesses for the hours of hard work and preparation they had spent.

At this point, in the absence of the 1st Vice-President, the President asked Mrs. Donnie Royal, a past President, to take the chair, so that she might give her President's Report (attached), which was somewhat of a precis of the report given with other annual reports, and essentially the same report she had given to the Medical Society House of Delegates.

Report of Officers

Mrs. Paul McCain, Chairman of Past Presidents, introduced those Past Presidents who were present, 16 in number, as follows:

Mrs. Paul P. McCain, Wilson
Mrs. A. Byron Holmes, Fairmont
Mrs. William P. Knight, Greensboro
Mrs. Charles P. Eldridge, Raleigh
Mrs. Charles F. Strosnider, Goldsboro
Mrs. Sidney Smith, Raleigh
Mrs. Robert A. Moore, Winston-Salem
Mrs. Karl B. Pace, Greenville
Mrs. W. Reece Berryhill, Chapel Hill
Mrs. B. Watson Roberts, Durham
Mrs. Roscoe McMillan, Red Springs
Mrs. G. M. Billings, Morganton
Mrs. P. G. Fox, Raleigh
Mrs. R. D. Croom, Jr., Maxton
Mrs. Donnie Royal, Salemburg
Mrs. Paul Johnson, Winston-Salem

Mrs. Paul Johnson, 1st Vice-President, introduced District Councilors, who in turn introduced County Presidents and Presidents-Elect who were present. (see attached program) NOTE—9th District will soon have one new county organization, Davidson, and with the organization of Duplin County, the 3rd District will now be 100%.

2nd Vice-President, Mrs. Charles D. Thomas, thanked the group for all gifts to Sanatoria Bed guests, and for cooperation throughout the year. She then introduced the Sanatoria Bed Chairmen, none of whom were present, and Student Loan Fund Chairman, Mrs. Roscoe McMillan. Mrs. McMillan thanked the various counties for their interest and work, and stated that this was certainly the best year yet for the Student Loan Fund.

Other officers were recognized—Recording Secretary, Mrs. H. D. Riddle; Corresponding Secretary, Mrs. Marvin McRae; Treasurer, Mrs. W. Ralph Deaton, Jr. Mrs. Deaton at this po nt noted one explanation of the Financial Statement. (See attached form)

Committee Chairmen were recognized according to the mimeographed agenda.

Civil Defense Chairman Mrs. Amos Johnson, asked everyone to pick up Civil Defense material outside, to take home, and said some of this material would be available in the packets at the Fall Board Meeting.

Memorials Chairman Mrs. William P. Richardson asked the group to stand in tribute to the eight deceased members, and read the names. (See Memorial Service Minutes.)

Representatives to other state organizations were recognized. (See Program)

Treasurer, Mrs. W. R. Deaton, Jr., presented the tentative budget, with three changes. (See Financial Committee Minutes) The motion was made by Mrs. Deaton, seconded by Mrs. Marvin McRae, and passed, to accept this budget.

Old Business

The President asked the Recording Secretary to read six recommendations from the Board of Directors, to be voted upon separately, as follows:

1. That, to avoid duplication, the Program Committee and the Radio TV and Movies Committee be combined, this combining of committees to become effective at the end of the present Chairmen's terms, May, 1961. Further recommended that the section on Committees in the By-Laws, Article XIV, Section 2, be amended accordingly. Motion to accept was made by Mrs. Lawrence Owsley, seconded by Mrs. A. T. Melero, and carried.

2. That the Today's Health Committee be discontinued at the end of the present Chairman's term, May, 1961, since the National Auxiliary had discontinued the sale of Today's Health Magazine as a major project. Further recommended that this Committee be deleted from the By-Laws, Article XIV, Section 2. Motion was made by Mrs. Roy M. Smith, seconded by Mrs. J. F. McGowan, and was passed.

3. That the qualifications for the office of President of the Auxiliary to the Medical Society of the State of North Carolina shall be more clearly defined, stating that the President must have served her County Auxiliary as president, and must have served on the State Board of Directors for a period of three (3) years, as an officer, committee chairman, councilor, or any combination of these. Motion was made by Mrs. A. Byron Holmes, seconded by Mrs. C. M. Norfleet, and was passed.

4. That the duties of the President-Elect be more clearly defined, and these shall include the preparation and typing of the Master Lists of all county Auxiliary officers and chairmen, with specific breakdowns for Councilors, Committee Chairmen and Treasurer; she shall keep up to date the card file of all Auxiliary members in the State, recording any change in the member's status, offices held, etc.; and that she be charged with the responsibility of conducting the Workshop sessions held at the Fall Board Meeting each year, working in close cooperation with the President. It is to be noted that the President-Elect has been carrying out all these functions, but this recommendation is intended to include them in her official duties so that she may more fully prepare herself for the office of President. Motion was made by Mrs. Paul Johnson, seconded by Mrs. W. P. Richardson, and was passed.

5. That a complete revision of the By-Laws be undertaken, beginning in 1960, with special reference to the duties of officers, line of succession, etc.; this is to be undertaken to incorporate the various changes outlined in previous Recommendation of the Executive Committee, to facilitate the work of the State Auxiliary, and to take advantage of valuable suggestions made by the National Auxiliary. It is suggested that the By-Laws Committee work in close cooperation with the Legal Department of the State Medical Society. Motion was made by Mrs. A. T. Melero, seconded by Mrs. Baxter Troutman, and was passed.

New Business

The Recording Secretary read the following recommendation which had been published in "Auxiliary News":

6. The Executive Committee of the Aux. to the Medical Society of the State of N. C., in accordance with the By-Laws, presents the proposed changes in the By-Laws, subject to the approval by vote of the House of Delegates: Section 5—There shall be a Nominating Committee consisting of five members and two alternates, as follows:

a. Two of the five members shall be past presidents, with the immediate past president automatically becoming a member of the Nominating Committee and serving as Chairman.

b. The remaining members shall be elected and no two may come from the same district.

c. The Nominating Committee shall be elected at the Board Meeting immediately preceding the Annual Meeting.

d. The Nominating Committee shall confer and come to an agreement before asking anyone to serve, and shall obtain the consent of all nominees before presenting their names. Nominations shall be permitted from the floor.

The above change combines Section 5 and Section 6 of the By-Laws, and places the immediate past president on the Nominating Committee, to serve as Chairman, and includes one additional past president. Motion was made by Mrs. Z. F. Long, seconded by Mrs. Lawrence Owsley, and was passed.

The President then asked the Recording Secretary to read in full the report and recommendations from the Mental Health Committee (See Minutes of Board of Directors Meeting). Motion was made by Mrs. Roscoe McMillan, seconded by Mrs. Henry Sikes, and was passed. (During discussion, before above motion was passed, Mrs. Garrard replied to a question, that the reason the University of N. C. was chosen to handle this endowment fund, was that it is a state-supported university, and we are a state organization.)

Immediately after motion was carried, Mrs. Roy Smith, Guilford-Greensboro Branch, asked for the floor. She said that her county Auxiliary—and Mrs. Garrard's—wanted to contribute $100.00 as the beginning of this Mental Health Endowment Fund. The President very graciously accepted this contribution.

The Recording Secretary was then asked to read in full a suggestion from the 1st Vice President, Mrs. Paul Johnson:

"As 1st Vice President in charge of Membership and Organization, I would like to emphasize the importance of this assignment. Increasing membership is vital to the strength of the Auxiliary, and learning more about the membership and various problems is a challenge. Much thought and imagination are required in fulfilling the functions of First Vice President. It has become increasingly evident that our officer alignment or 'Chain of Command' should be made to conform

with our National Auxiliary, namely the First Vice-President is an elected officer, frequently succeeding as President-Elect and President. Thus the duties of First Vice-President could be a forerunner to the office of President. In our State Auxiliary, this office is automatically filled by the outgoing President. It is obvious that a thorough knowledge of Membership and Organization would render a President much more effective in her service to the Auxiliary, and she would find this experience more helpful before her term as president than after it. Therefore, as immediate Past-President,I suggest that the First Vice-President in charge of Membership and Organization become a duly nominated and elected officer each year. This will necessitate a change in the By-Laws, Article 5, Section 2."

(Further) If the First Vice-President is to become an Elected Officer, then we should consider that the out-going President become a **Director**, serving for one year, and she will have full responsibility for preparing Report Forms for the use of Committee Chairmen. These forms are to be prepared and presented to the State President for inclusion in the Packets at the Fall Board Meeting. This would eliminate confusion, incomplete or inadequate report forms, and will make our National reporting much easier."

Mrs. Garrard stated that this suggestion would come up at the Fall Board Meeting for consideration as a recommendation.

She also mentioned that she had asked Dr. Reece, President of the Medical Society, to bring up, if possible, a recommendation before the Medical Society, to change the name of the society to "N. C. Medical Society", so that our own official title would be less unwieldy.

In the absence of any other business, the meeting was then adjourned, and a coffee and Coca-Cola break was enjoyed.

Mrs. H. D. Riddle
Recording Secretary

Mrs. R. L. Garrard
President
Date: June 3, 1960

General Meeting
May 10, 1960

The 37th Annual General Meeting of the Auxiliary to the Medical Society of the State of North Carolina convened at 10:30 A.M., in the Virginia Dare Room of the Hotel Sir Walter, Raleigh, with the President, Mrs. R. L. Garrard presiding. The Invocation was given by Mrs. William P. Knight, followed by the Auxiliary Pledge of Loyalty, with all participating.

A most gracious welcome was given by Mrs. Thomas B. Wilson, President of Wake County Auxiliary, followed by a humorous and appreciative response by Mrs. Roy M. Smith, President of Guilford-Greensboro Auxiliary.

The President also expressed her gratitude for the tremendous work of preparation that our hostesses had done.

The Convention Chairman, Mrs. Paul Simpson, reminded us of the bus schedules for the luncheon and the tea. She also stated that at last count, here were 255 Auxiliary members registered.

Mrs. Garrard regretted that Mrs. Frank Gastineau, President of the Auxiliary to the American Medical Association, had had to leave the previous night, so could not be with us. She then introduced other distinguished guests: Mrs. John M. Chenault, President of the Auxiliary to Southern Medical Association; Miss Martha Adams, President of the N. C. State Nurses' Association, who spoke briefly and extended greetings; Miss Agnes Campbell, 1st Vice-President (substituting for Miss Sue Kerley, President) of N. C. League for Nursing; Mrs. Mary K. Kneedler, Chief of Public Health Nursing, N. C. Public Health Department; Dr. Jean Brooks, member of the Advisory Committee of the Medical Society, was not present, nor were Mrs. Annette Boutwell, Mrs. James Barnes, nor Mrs. William Hilliard.

Dr. Roscoe McMillan, Chairman of the Advisory Committee, was unable to be present, as was Dr. John Reece, President of the Medical Society. Dr. Reece sent greetings in the form of a letter, which was read by the Recording Secretary. (Attached to Minutes of Board of Directors' Meeting)

Stanly County President, Mrs. George E. Eddins, Jr., asked her local AMEF Chairman, Mrs. L. H. Harris, to tell the group about a money-making project for AMEF that they were planning. Mrs. Harris said, however, that these plans were still incomplete. Mrs. Garrard asked that when they had worked out the details, they bring them to the Fall Board Meeting, so that we might all have the benefit of any new ideas.

The President at this time pointed out that this was National Hospital Week.

She then introduced, for a delightful entertainment, a chorus from the Guilford County Auxiliary—Greensboro Branch, 22 singers who were all Auxiliary members. The group was directed by Mrs. John W. Allgood, and accompanied by Mrs. H. B. Perry. Their numbers were "Get Me to the Church on Time", "I Could Have Danced All Night", "Three Blind Mice", "Lady of Spain", "The Cuckoo Clock", and "All the Things You Are". This was an unusually good rendition, and all the more enjoyable because of the singers' being Auxiliary members.

Mrs. Karl B. Pace introduced the Past Presidents, of whom the following 16 were present: Mrs. Paul P. McCain, Wilson; Mrs. A. Byron Holmes, Fairmont; Mrs. William P. Knight, Greensboro; Mrs. Charles P. Eldridge, Raleigh; Mrs. Charles F. Stronsnider, Goldsboro; Mrs. Sidney Smith, Raleigh; Mrs. Robert Moore, Winston-Salem; Mrs. Karl B. Pace, Greenville; Mrs. W. Reece Berryhill, Chapel Hill; Mrs. B. Watson Roberts, Durham; Mrs. Roscoe McMillan, Red Spring; Mrs. G. M. Billings, Morganton; Mrs. Powell G. Fox, Raleigh; Mrs. R. D. Croom, Jr., Maxton; Mrs. Donnie M. Royal, Salemburg; Mrs. Paul Johnson, Winston-Salem.

Mrs. Garrard then introduced Mrs. John M. Chenault, President, Auxiliary to Southern Medical Association, of Decatur, Alabama. She reported that there are 948 N. C. doctors now members of the Southern Medical Association, and suggested that the gift of a membership for our husbands would be good idea for any occasion. The annual convention of SMA will be in St. Louis on October 31. She advised that "Love is the most essential gift a doctor's wife should have, both for our fellow man, and for the profession of medicine," and that it would help us to fight off the "demons of jealousy, selfishness, and criticism." She finished her inspiring talk with the quotation, "It is not the height of the mountain that deters the climber, but rather the tack in his shoe", and urged us to "get the tacks out".

Mrs. Garrard called upon Mrs. James F. Reinhardt, Community Service Chairman, who was in charge of the program, "We Did It Like This". Mrs. Reinhardt pointed out that although the mimeographed Annual Reports enable us to get a good overall idea of the work being done, some-

times perhaps we miss the personal enthusiasm and intimacy of the county workers. So this program was planned to let some of these workers tell us how they had accomplished certain goals. These representatives were from both large and small organizations.

For AMEF, Mrs. A. B. Croom, President of Guilford County-High Point Branch, said they increased their contribution from $50.00 to $150.00, simply by increasing their dues $2.00 each.

For Doctors' Day, Alamance-Caswell Auxiliary (small), as told by Mrs. J. H. Hawkins, President, gave their own production of "Gigi", with words and parodies borrowed from Forsyth-Stokes' performance last year, and augmented to suit their own group.

For Doctors' Day Guilford County-Greensboro Branch (over 50 members), as told by Mrs. Roy M. Smith, President, had a buffet dinner in the hall of one of the new churches, and entertainment was provided by the Chorus from their own Auxiliary. The retired doctors of the county were special guests of honor.

Mrs. W. L. Kirby, from Forsyth-Stokes Auxiliary, told of their work in Mental Health, with special reference to their work with the aged. Mrs. Chalmer R. Carr, Mecklenburg Auxiliary, told of their Paramedical Careers Recruitment work, which they worked in with a Hospital Career Day, for local students, etc. Mrs. H. M. Wilson (substituting for Mrs. Len D. Hagaman), President-Elect of Watauga County, described their methods of earning money for the Student Loan Fund. Mrs. James E. Ribet, substituting for Mrs. J. Taylor Vernon, Burke County, told about their fund raising for the Yoder Bed Endowment Fund.

After this informative program, Mrs. Garrard asked Mrs. Powell G. Fox to present the awards for the year's work. Mrs. Fox then said that the program we had just heard had told us mostly where the awards were going. They were as follows:

1. AMEF—The Shirley Kingsbury Fox "Talents for Service Award", given by Mrs. P. G. Fox—$100.00.
   For highest per capita contribution—Guilford-High Point Branch
   Also, certificates to Forsyth-Stokes for largest contribution, and Cabarrus for outstanding increase.
2. Doctors' Day—given by Mrs. Harvey C. May
   County with over 50 members—$5.00—Guilford-Greensboro Branch
   County with under 50 members—$5.00—Alamance-Caswell
3. Paramedical Careers Recruitment—the Rachel Taylor Award, given by Mrs. Almon R. Cross
   County with over 30 members—$5.00—Mecklenburg
   County with under 30 members—$5.00—Anson
4. Dues 100% paid (first)—given by Mrs. G. M. Billings
   Award—$5.00—to Union County
   Honorable mention to Bladen County
5. Research and Romance of Medicine—given by Mrs. Donnie Royal—no candidates for this award, so it will be held over till next year.
6. Student Loan Fund—given by Mrs. Roscoe D. McMillan and Mrs. B. Watson Roberts—$10.00—to Watauga County
7. Mental Health—given by Mrs. Karl B. Pace—$5.00—to Forsyth-Stokes
8. Yoder Bed Endowment Fund—given by Mrs. R. D. Croom, Jr.—$5.00—to Burke County
9. County Yearbook—given by Mrs. Baxter S. Troutman—$5.00—to Robeson County
10. The President's County Achievement Award for the Best Overall Work—given by Mrs. R. L. Garrard—$10.00—to Gaston County

The President now asked for the report of the Nominating Committee, and Mrs. A. Byron Holmes, Chairman, gave it as follows:

President-Elect—Mrs. George T. Noel, Kannapolis

Second Vice-President—Mrs. James F. Reinhardt, Durham

Treasurer—Mrs. W. Ralph Deaton, Jr., Greensboro

The floor was then opened to nominations, of which there were none. The motion was made by Mrs. Byron Holmes to accept the slate as read, seconded by Mrs. Lawrence Owsley, and passed unanimously.

Mrs. Paul P. McCain, assuming her traditional role, then installed the following officers for 1960-61: President, Mrs. J. M. Hitch; President-Elect, Mrs. George T. Noel; 2nd Vice-President, Mrs. James F. Reinhardt; Treasurer, Mrs. W. Ralph Deaton, Jr.

Mrs. Garrard, with congratulations, presented the gavel to Mrs. Hitch, who made a few inaugural remarks, and pinned the Past President's Pin on Mrs. Garrard. Mrs. Hitch announced that the Fall Boad Meeting will be in Raleigh on September 7. She also recognized Mrs. E. Clarence Judd, who was our Treasurer for 20 years. Final registration was 338.

With no other business, the meeting was adjourned.

Mrs. H. D. Riddle
Recording Secretary

Mrs. R. L. Garrard
President
Date: June 3, 1960

Report of the Treasurer

The Audited Report of the Treasurer's records for the year 1959-1960 is submitted herewith, receipts and disbursements having been recorded and transactions made in accordance with the By-laws.

A membership of 2,279 was attained in 1959-1960 which is 14 less than last year due to two counties becoming inactive.

The financial picture of the Auxiliary is stable. A change has been made in the handling of the Contingency Fund which was in the checking account. The Auxiliary now holds a savings account representing share interests of two thousand dollars ($2,000) in the Home Federal Savings and Loan Association of Greensboro. We will receive 4% interest on this amount annually.

This year we were notified by the United States Treasury that two of our bonds in the Stevens Endowment Fund were to mature in July 1960 and that we were to be given the opportunity to reinvest these bonds in United States marketable bonds which would yield 4¾% interest. We took advantage of the opportunity although up to this time we have only invested in savings bonds.

At this time we are $534.26 short of completing the $10,000 Paul Allison Yoder Endowment Fund. We have $7500 in Savings Bonds and $1,965.74 in the Home Federal Savings and Loan Association of Greensboro.

During the year we issued student loans in the amount of $2500 which brings the total of our loans to $5000. We have already received requests for more loans, which if issued, will exhaust our Student Loan Fund until we receive more contributions or paid up loans.

(Continued on page 414)

REPORT ON EXAMINATION

June 30, 1960

Mrs. W. Ralph Deaton, Jr., Treasurer
The Auxiliary to the Medical Society of the State of North Carolina
Greensboro, North Carolina

Dear Mrs. Deaton:

We have examined the cash receipts and disbursements records of the Auxiliary to the Medical Society of the State of North Carolina for the fiscal year ended June 30, 1960. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We herewith present our report which consists of the following statements:

Exhibit A—Statement of Assets and Funds Balances
Exhibit B—Statement of Cash Receipts and Disbursements
Schedule 1—Investments
Schedule 2—Notes Receivable—Student Loans
Schedule 3—Cash Disbursements

In our opinion, the accompanying statements present fairly the assets and funds balances arising from cash transactions of the society at June 30, 1960, and the cash receipts and disbursements transactions for the year then ended on a basis consistent with that of the preceding year.

Respectfully submitted,
Davenport, Marvin & Caudle
Certified Public Accountants

EXHIBIT A

THE AUXILIARY TO THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA
STATEMENT OF ASSETS AND FUNDS BALANCES
June 30, 1960

ASSETS

Current Funds:			
Cash in Bank—Checking Account		$ 1,270.11	
Cash in Bank—Savings Account		2,000.00	
Total Current Funds			$ 3,270.11
Endowment Funds:			
Cash in Bank—Savings Accounts:			
Student Loan Fund	$ 1,458.12		
Mental Research Fund	100.00		
Paul Yoder Endowment Fund	1,965.74		
		3,523.86	
Investment (at cost)—Schedule 1		39,500.00	
Notes Receivable—Student Loans—Schedule 2		5,000.00	
Total Endowment Funds			48,023.86
Total Assets			$51,293.97

FUND BALANCES

Current Funds:		
General Expense Fund	$ 370.32	
Sanatoria Bed Fund	586.40	
Convention Expense Fund	313.39	
Contingency Fund	2,000.00	
Total Current Funds		$ 3,270.11
Endowment Funds:		
Student Loan Fund	6,458.12	
Mental Research Fund	100.00	
Paul Yoder Endowment Fund	9,465.74	
Martin L. Stevens Endowment Fund	10,500.00	
George M. Cooper Endowment Fund	10,000.00	
McCain Endowment Fund	11,500.00	
Total Endowment Funds		48,023.86
Total Fund Balances		$51,293.97

EXHIBIT B

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

For the Fiscal Year Ended June 30, 1960

	Total Current Funds	Current Funds: General Expense	Sanatoria Bed	Convention Expense	Contingency	Student Loan Fund	Mental Research Fund	Paul Yoder Endowment Fund
Receipts:								
National Dues	$ 2,270.00	$ 2,270.00	$ .00	$ .00	$ .00	$ .00	$ .00	$ .00
State Dues	2,270.00	2,270.00						
Medical Society of the State of North Carolina:								
National Fall Conference (Note)	150.00	150.00						
Forand Bill Pamphlets	23.00	23.00						
Convention Expenses	500.00			500.00				
Interest on U. S. Treasury Savings Bonds:								
Stevens Endowment Fund	299.50		299.50					
Cooper Endowment Fund	276.00		276.00					
McCain Endowment Fund	317.40		317.40					
Yoder Endowment Fund	212.45		212.45					
Interest on Savings Accounts:								
Contingency Fund	30.00	30.00						
Student Loan Fund						48.51		
Yoder Endowment Fund								30.02
Interest on Student Loan Receivable						7.50		
Contributions	168.40	100.00		68.40		1,042.50		892.20
Sale of "Handbook" and "Histories"	17.50	17.50						
American Medical Education Foundation (Rutherford County)	10.00	10.00						
Redemption of U. S. Treasury Savings Bond						966.00		
Transfers From:								
General Expense Fund	2,000.00				2,000.00		100.00	
Student Loan Fund	2,500.00	2,500.00						
Sanatoria Bed Fund								246.75
Total Receipts	11,044.25	7,370.50	1,105.35	568.40	2,000.00	2,064.51	100.00	1,168.97
Disbursements—Schedule 3	11,722.76	9,136.94	2,018.95	566.87	.00	2,500.00	.00	.00
Excess of Receipts Over Disbursements	(678.51)	(1,766.44)	(913.60)	1.53	2,000.00	(435.49)	100.00	1,168.97
Cash on Hand July 1, 1959	3,948.62	2,136.76	1,500.00	311.86	.00	1,893.61	.00	796.77
Cash on Hand June 30, 1960	$ 3,270.11	$ 370.32	$ 586.40	$ 313.39	$ 2,000.00	$ 1,458.12	$ 100.00	$ 1,965.74

Note—Does not include $150.00 paid direct to President.

SCHEDULE OF INVESTMENTS
June 30, 1960

Schedule 1

Kind	Series	Date Issued	Maturity Date	Total	Endowment Fund			
					Martin L. Stevens	George M. Cooper	McCain	Paul Yoder
U. S. Treasury Savings Bonds	G	February 1949	February 1961	$ 2,000.00	$ 2,000.00	$ .00	$ .00	$ .00
U. S. Treasury Savings Bonds	G	July 1950	July 1962	2,000.00	2,000.00			
U. S. Treasury Savings Bonds	G	June 1951	June 1963	1,000.00	1,000.00			
U. S. Treasury Notes		July 1959	May 1964	2,000.00	2,000.00			
U. S. Treasury Savings Bonds	K	June 1952	June 1964	1,000.00	1,000.00			
U. S. Treasury Savings Bonds	K	August 1954	August 1966	1,500.00		1,500.00		
U. S. Treasury Savings Bonds	K	September 1954	September 1966	2,500.00			2,500.00	
U. S. Treasury Savings Bonds	K	May 1955	May 1967	1,500.00		1,500.00		
U. S. Treasury Savings Bonds	K	June 1955	June 1967	11,000.00		3,000.00	7,000.00	1,000.00
U. S. Treasury Savings Bonds	K	August 1955	August 1967	6,000.00		4,000.00	2,000.00	
U. S. Treasury Savings Bonds	K	September 1955	September 1967	500.00	500.00			
U. S. Treasury Savings Bonds	H	January 1958	January 1968	1,000.00				1,000.00
U. S. Treasury Savings Bonds	H	March 1958	March 1968	500.00				500.00
U. S. Treasury Savings Bonds	K	May 1956	May 1968	2,000.00				2,000.00
U. S. Treasury Savings Bonds	K	June 1956	June 1968	1,500.00				1,500.00
U. S. Treasury Savings Bonds	K	April 1957	April 1969	1,500.00	1,000.00			500.00
U. S. Treasury Savings Bonds	H	February 1959	February 1969	1,000.00				1,000.00
U. S. Treasury Savings Bonds	H	September 1959	September 1969	1,000.00	1,000.00			
Total Investments				$39,500.00	$10,500.00	$10,000.00	$11,500.00	$ 7,500.00

Schedule 2

SCHEDULE OF NOTES RECEIVABLE—STUDENT LOANS
June 30, 1960

Name	Amount
Jerome Miles Schacter	$ 500.00
Norris A. Biggerstaff	500.00
Thomas A. Readling	1,000.00
Ronnie Lee Stanley	1,000.00
John Edwin Drew	1,000.00
Robert H. Fleming	500.00
Dick Redmond Lavender	500.00
Total	$ 5,000.00

Note—Student loans are payable three years after date of note and bear interest @ 3% per annum on unpaid balance therefrom. Following notes due at June 30, 1960:

Name	Dated	Amount
Jerome Miles Schacter	10-15-55	$ 500.00
Norris A. Biggerstaff	1-30-57	500.00
Total		$ 1,000.00

SCHEDULE OF CASH DISBURSEMENTS

For the Fiscal Year Ended June 30, 1960

Schedule 3

	Total Current Funds	Current Funds: General Expense	Sanatoria Bed	Convention Expense	Contingency	Student Loan Fund	Mental Research Fund	Paul Yoder Endowment Fund
National Dues	$ 2,279.00	$ 2,279.00	$ .00	$ .00	$ .00	$ .00	$ .00	$ .00
Officers and Chairmen Expenses:								
President	398.48	398.48						
President-Elect	250.00	250.00						
Vice-Presidents and Secretary	52.85	52.85						
Treasurer	217.85	217.85						
Councilors	90.75	90.75						
Committee Chairmen	182.88	182.88						
Auxiliary News	327.49	327.49						
Science Fair	50.00	50.00						
Forand Bill Pamphlets	23.00	23.00						
Refund to U. S. Treasury (Interest on Savings Bond)	19.00	19.00						
Refund of Overpayment of Dues	2.00	2.00						
American Medical Education Foundation	10.00	10.00						
Student Loan Grants	2,500.00	2,500.00						
Safety Deposit Box Rental	5.50	5.50						
Professional Services—Auditing	100.00	100.00						
Treasurer's Fidelity Bond	50.00	50.00						
Printing and Supplies								
General	150.14	150.14						
Year Books	328.00	328.00						
Purchase of U. S. Treasury Savings Bond (Stevens Endowment Fund)	1,000.00		1,000.00					
Upkeep of Sanatoria Beds:								
McCain (N. C. Sanitorium)	183.60		183.60					
Cooper (Eastern N. C. Sanitorium)	34.20		34.20					
Stevens (Western N. C. Sanitorium)	231.60		231.60					
Yoder (Gravely Sanitorium) (Note)	322.80		322.80					
Convention Expenses (Other than luncheon meal)	566.87			566.87				
Transfers to:								
Mental Research Fund	100.00	100.00						
Contingency Fund	2,000.00	2,000.00						
Yoder Endowment Fund	246.75		246.75					
General Expense Fund						2,500.00		
Total Disbursements	$11,722.76	$ 9,136.94	$ 2,018.95	$ 566.87	$ .00	$ 2,500.00	$ .00	$ .00

Note—Includes $146.40 paid for Cooper bed patient transferred from Eastern N. C. Sanitorium.

We were delighted to set up another endowment fund called the Mental Research Fund. Greensboro Branch of Guilford County Medical Auxiliary started the fund off by contributing $100.00. This has been placed in a savings account in Home Federal Savings and Loan Association.

My job as Treasurer was considerably easier this year due in part to having now had some experience at the job and in part to recommendations from the Auditor who suggested changes that made the bookkeeping easier.

As experienced the first year as Treasurer, having had the opportunity of working with every member of the Executive Board has been a very worthwhile experience, and I would like to thank them for all their help and cooperation. My thanks go also to Mr. James T. Barnes and to each member of his staff for their help at the Convention and to Dr. R. D. McMillan and Dr. Jean Brooks for their interest in the welfare and activities of the Auxiliary.

ROSTER OF MEMBERS
1960-1961

HONORARY MEMBERS

Holmes, Mrs. Andrew Byron
112 Church Street ..... Fairmont
Judd, Mrs. E. Clarence
2108 Woodland Ave. ..... Raleigh
Knight, Mrs. William Pinkney
720 Summit Ave. ..... Greensboro
McCain, Mrs. Paul Pressly, Route 1, Box 31, Wilson
Taylor, Mrs. Frederick R.
1113 Johnson St. ..... High Point

LIFE MEMBERS

Britt, Mrs. James Norment
209 E. 10th St. ..... Lumberton
Eldridge, Mrs. Charles Patterson,
1621 St. Mary's St. ..... Raleigh
Freeman, Mrs. Jere David
527 Forest Hills Dr. ..... Wilmington
Johnson, Mrs. George W.
1803 Chestnut St. ..... Wilmington
Murray, Mrs. Robert Lebby, Box 216 ..... Raeford
Thomas, Mrs. Charles Darwin ..... Black Mountain
Yoder, Mrs. Paul A.
1919 Robin Hood Rd. ..... Winston-Salem

MEMBERS

Abbott, Mrs. Robert West
State Hospital ..... Goldsboro
Abernethy, Mrs. Joseph Whitner
343 Second St., N. W. ..... Hickory
Abernethy, Mrs. Paul McBee
510 Country Club Dr. ..... Burlington
Acuff, Mrs. Calvin Clifford ..... Glen Alpine
Adair, Mrs. William Edward, Jr.
502 East G St. ..... Erwin
Adams, Mrs. Carlisle
1500 Meadowood Lane ..... Charlotte
Adams, Mrs. Carlton Noble
2930 Windsor Rd. ..... Winston-Salem
Adams, Mrs. Charles H. ..... Grover
Adams, Mrs. Charles Patrick
1907 Forest Hill Dr. ..... Greenville
Adams, Mrs. Harley Stewart
432 Carolina Circle ..... Winston-Salem
Ader, Mrs. Ottis Ladeau ..... Walkertown
Aderholt, Mrs. Marcus Lafayette, Jr.
1013 Rotary Dr. ..... High Point
Adkins, Mrs. Trogler Francis
2810 Dogwood Rd. ..... Durham
Agner, Mrs. Marshall Edward, Box 157, Cherryville
Agner, Mrs. Roy Augusta, Jr.
400 Merritt Ave. ..... Salisbury
Akeson, Mrs. Wayne H.
21 Flemington Rd. ..... Chapel Hill
Albergotti, Mrs. Julian S., Jr.
412 Livingston Dr. ..... Charlotte
Alderman, Mrs. Allison Mondonville, Jr.
1311 Westfield Ave. ..... Raleigh
Alderman, Mrs. Edward H., Drawer P, Four Oaks
Alexander, Mrs. Eben, Jr.
521 Westover Ave. ..... Winston-Salem
Alexander, Mrs. James Moses
255 Colville Rd. ..... Charlotte
Alexander, Mrs. James Porter
1910 Beverly Dr. ..... Charlotte
Alexander, Mrs. Joseph Black
1001 N. Walnut St. ..... Lumberton
Alexander, Mrs. Lawrence M. ..... Sanford
Alexander, Mrs. Sydenham B.
511 Dogwood Dr. ..... Chapel Hill
Alexander, Mrs. William McKinley
1110 Fourth Ave., West ..... Hendersonville
Allen, Mrs. Charles Insley, Sr. ..... Wadesboro
Allen, Mrs. George Calvin,
206 E. 17th St. ..... Lumberton
Allen, Mrs. John O. Henry, 201 Broad St., Marion
Allen, Mrs. LeRoy, 1603 Ridge St. ..... Raleigh
Allgood, Mrs. John William, Jr.
105 Knollwood Dr. ..... Greensboro
Alsup, Mrs. William Byrn, Jr.
261 Westview Dr. ..... Winston-Salem
Altany, Mrs. Franklin Edward
822 Longbow Rd. ..... Charlotte
Alyea, Mrs. Edwin Pascal
3102 Devon Rd., Hope Valley ..... Durham
Ames, Mrs. Richard Haight
2316 Princess Ann St. ..... Greensboro
Anders, Mrs. McTyeire Gallant
416 W. 5th Ave. ..... Gastonia
Anderson, Mrs. Elbert Carl
4934 Oleander Dr. ..... Wilmington
Anderson, Mrs. John Bascom
294 Vanderbilt Rd. ..... Asheville
Anderson, Mrs. Norman LaRue
33 Forest Road ..... Asheville
Anderson, Mrs. William Banks
502 E. Forest Hills Blvd. ..... Durham
Andrew, Mrs. John Montgomery
Box 524 ..... Lexington
Andrew, Mrs. Lacy Allen, Jr.
2839 Reynolds Rd. ..... Winston-Salem
Andrews, Mrs. Bob Barcus, 503 W. 31st, Lumberton
Andrews, Mrs. George R.
3354 Hampton Road ..... Raleigh
Andrews, Mrs. Leon Polk
2217 Winterlocken Rd. ..... Fayetteville
Andrews, Mrs. Robert Jackson
1130 S. Live Oak Parkway ..... Wilmington
Andrews, Mrs. Vernon Liles ..... Mt. Gilead
Anthony, Mrs. Luther Leslie,
1210 Jones St. ..... Gastonia
Anthony, Mrs. William Augustus
1203 Belvedere Ave. ..... Gastonia

Antonakos, Mrs. Theodore ..... Danbury
Arena, Mrs. Jay Morris, 2032 Club Blvd.., Durham
Arey, Mrs. John Vincent, 89 Caldwell Dr. Concord
Armistead, Mrs. Drury Branch
1603 E. 6th St. ..... Greenville
Armstrong, Mrs. Beverly Weller
1 Armstrong Drive ..... Charlotte
Arney, Mrs. William Charles,
W. Park Dr. ..... Morganton
Arnold, Mrs. Jesse Hoyt, Jr.
709 W. Highland Ave. ..... Kinston
Arnold, Mrs. Ralph A., 911 Urban Ave., ... Durham
Arrendell, Mrs. Cad Walder, Jr.
500 Merwick Cl. ..... Charlotte
Arthur, Mrs. Robert
308 Hinsdale Ave. ..... Fayetteville
Arthur, Mrs. Robert Key, Jr.
405 Rolling Rd. ..... High Point
Ashe, Mrs. John Rainey, Jr.
203 Grandview Dr. ..... Concord
Ashford, Mrs. Charles Hall
605 Pollock St. ..... New Bern
Atkins, Mrs. Stanley Sisco
7 N. Dogwood Rd. ..... Asheville
Ausband, Mrs. John Rufus
817 Shoreland Rd. ..... Winston-Salem
Ausherman, Mrs. Howard Milton
233 Fenton Place ..... Charlotte
Austin, Mrs. Frederick DeCosta, Jr.
605 Colville Rd. ..... Charlotte
Averett, Mrs. Leland Stanley, Jr.
1506 Whitehall ..... High Point
Avery, Mrs. Edward Stanley
1824 Meadowbrook Dr. ..... Winston-Salem
Aycock, Mrs. Edwin Burtis
Longmeadow Rd. ..... Greenville
Aycock, Mrs. James Bernice
110 Maehill Dr. ..... Lenoir
Aycock, Mrs. William Glenn
E. Graham St. ..... Mebane
Ayers, Mrs. James Salisbury, Finch St., ... Clinton

Bagby, Mrs. Bathurst Browne, Jr.
17 Highland Rd. ..... Asheville
Baggett, Mrs. Joseph Woodrow
365 Valley Rd. ..... Fayetteville
Bahnson, Mrs. Edward Reid
2525 Windsor Rd. ..... Winston-Salem
Bailey, Mrs. Clarence Whitfield
512 Shady Circle Dr. ..... Rocky Mount
Bailey, Mrs. Joseph Peden ..... Hendersonville
Bailey, Mrs. Mercer H.
Winslow Acres ..... Elizabeth City
Bailey, Mrs. Robert Carl, 330 Scenic Dr., Concord
Baker, Mrs. Barnwell Rhett
31 Buena Vista Rd. ..... Asheville
Baker, Mrs. Herbert Marvin ..... Faith
Baker, Mrs. Horace Mitchell, Jr.
1901 N. Elm St. ..... Lumberton
Baker, Mrs. Horace Mitchell, Sr.
703 N. Elm St. ..... Lumberton
Baker, Mrs. Larry Duane
3116 Gardner Park Dr. ..... Gastonia
Baker, Mrs. Lenox Diel
3106 Cornwall Rd., Hope Valley ..... Durham
Baker, Mrs. Roger D.
303 Swift Ave. ..... Durham
Baker, Mrs. Thomas Williams
2029 Queens Rd. ..... Charlotte
Baldwin, Mrs. William Edwin, Jr.
Wilmington Rd. ..... Whiteville
Ballenger, Mrs. Claude Newton
750 Pee Dee Ave. ..... Albemarle
Ballew, Mrs. James Robert
901 Lake Boone Trail ..... Raleigh
Balsley, Mrs. Robert Eugene
825 Crescent Drive ..... Reidsville
Baluss, Mrs. John William, Jr.
2315 Westdale Dr. ..... Fayetteville

Bandy, Mrs. William Gaither
601 N. Laurel St. ..... Lincolnton
Bandy, Mrs. William Henry
Dogwood Hills ..... Newton
Barden, Mrs. Graham Arthur, Jr.
412 Johnson St. ..... New Bern
Barefoot, Mrs. Graham Ballard
120 Forest Hills Dr. ..... Wilmington
Barefoot, Mrs. Julius J., Jr.
Morehead Rd. ..... New Bern
Barefoot, Mrs. Sherwood Washington
3107 Madison Ave. ..... Greensboro
Barefoot, Mrs. William Frederick
Chadbourn Rd. ..... Whiteville
Barker, Mrs. Christopher Sylvanus
711 Broad St. ..... New Bern
Barnes, Mrs. Frank Edward, Jr.
513 Church St. ..... Smithfield
Barnes, Mrs. Henry Eugene, Jr.
528 First Ave., N. W. ..... Hickory
Barnes, Mrs. James Allen
2259 Sherwood Dr. ..... Winston-Salem
Barnes, Mrs. M. Russell, Jr.
128 Bryan Pl. ..... Jacksonville
Barnhardt, Mrs. Albert Earl, Box 662, Kannapolis
Barnhill, Mrs. Otha Allen, Box 505, Elizabethtown
Barrett, Mrs. John Milton
805 James St. ..... Greenville
Barrick, Mrs. Harry, Jr.
914 Lake Boone Trail ..... Raleigh
Barrier, Mrs. Henry Webster
1500 Central Dr. ..... Concord
Barringer, Mrs. Archie Lipe
Box 278 ..... Mt. Pleasant
Barringer, Mrs. Phil Lewis, Forest Hills, Monroe
Barron, Mrs. John Isaac
508 Riverside Dr. ..... Morganton
Barry, Mrs. William, 216 Roberts St., ... Raeford
Barry, Mrs. William Francis, Jr.
1022 Gloria Ave. ..... Durham
Bartels, Mrs. Kenneth Garber
312 Regal ..... Hendersonville
Bartlett, Mrs. Stephen Russell, Jr.
208 N. Longmeadow Rd. ..... Greenville
Bass, Mrs. Beaty Lee
415 S. Ridgecrest Ave. ..... Rutherfordton
Bates, Mrs. Harold Bascom
1007 Sherwood Dr. ..... Burlington
Batten, Mrs. Hubert Elmore
301 Fairfield Rd. ..... Fayetteville
Batten, Mrs. Woodrow, 402 Church St., Smithfield
Baylin, Mrs. George Jay
2535 Wrightwood Ave. ..... Durham
Baynes, Mrs. Ralph H. ..... Hurdle Mills
Beale, Mrs. Seth McPherson, Box 538 ..... Elkin
Beall, Mrs. Lawrence Lincoln
1850 North Elm St. ..... Greensboro
Bear, Mrs. Sigmond Aaron
1415 S. Live Oak Parkway ..... Wilmington
Beavers, Mrs. Charles Lee
1110 Sunset Dr. ..... Greensboro
Beavers, Mrs. James Wallace
2206 W. Market St. ..... Greensboro
Beavers, Mrs. William Olive, Route 1, McLeansville
Beck, Mrs. J. Montgomery, Route 7, ... Burlington
Becknell, Mrs. George Franklin, Jr.
Forest Hills ..... Forest City
Beddingfield, Mrs. Edgar Theodore, Jr.
..... Stantonsburg
Belcher, Mrs. Cecil Cullen, 28 Hilltop, ... Asheville
Belk, Mrs. George Washington
403 W. 6th Ave. ..... Gastonia
Bell, Mrs. George Erick, Sr.
1505 W. Nash St. ..... Wilson
Bell, Mrs. Ira Eugene
508 6th St., N. W. ..... Hickory
Bell, Mrs. Orville Earl
829 Sycamore St. ..... Rocky Mount

Bell, Mrs. Spencer Alexander
Box 33 Hamptonville
Bellamy, Mrs. Robert Hartlee
Greenway Ave. Wilmington
Benbow, Mrs. Edgar Vernon
1411 Reynolda Rd. Winston-Salem
Benbow, Mrs. Edward Perry, Jr.
3809 Friendly Road Greensboro
Bender, Mrs. John Joseph Red Springs
Bender, Mrs. John Robert
1166 S. Hawthorne Rd. Winston-Salem
Bennett, Mrs. Ernest Claxton
Box 295 Elizabethtown
Bennett, Mrs. Hairon Kent Archdale
Bennett, Mrs. Hugh Hammond, Jr.
441 Circle Dr. Burlington
Bennett, Mrs. John Northwood
c/o Wilkes General Hospital North Wilkesboro
Bennett, Mrs. Paul, Jr., 109 S. Andrews, Goldsboro
Bensen, Mrs. Vladimir Basil
Blue Ridge Road Raleigh
Benson, Mrs. John Fisher
710 Gatewood High Point
Benson, Mrs. Norman Oliver
203 E. 19th St. Lumberton
Benton, Mrs. George Ruffin, Jr.
207 S. Pineview Ave. Goldsboro
Benton, Mrs. Wayne Jefferson
1003 N. Eugene St. Greensboro
Berkeley, Mrs. Alfred Rives, Jr.
541 Hempstead Place Charlotte
Berkeley, Mrs. William Thomas, Jr.
1870 Queens Rd., W. Charlotte
Berry, Mrs. Francis Xavier
1208 Colonial Ave. Greensboro
Berryhill, Mrs. Walter Reece
Box 866, Upper Laurel Hill Chapel Hill
Bertling, Mrs. Marion Henry
2312 Princess Ann St. Greensboro
Best, Mrs. Deleon Edward
1504 E. Mulberry St. Goldsboro
Best, Mrs. William Ross
1510 Sherwood Dr. Burlington
Bethea, Mrs. William Thad Fair Bluff
Betts, Mrs. Wilmer Conrad
3422 Leonard St. Raleigh
Biggs, Mrs. Dennis Walter, Jr.
205 West 22 St. Lumberton
Biggs, Mrs. John Irvin, 2201 Elm St., Lumberton
Billings, Mrs. Gilbert M., 122 Powe St., Morganton
Bingham, Mrs. Robert Knox, 105 Hardin St., Boone
Bitting, Mrs. Numa Duncan, 34 Oak Dr. Durham
Bittinger, Mrs. Charles Lewis
734 Pinewood Circle Mooresville
Bittinger, Mrs. Samuel Moffett
Blue Ridge Rd. Black Mountain
Bivens, Mrs. Edward Shirley
601 East St. Albemarle
Bizzell, Mrs. James W., Overbrook Drive, Goldsboro
Bizzell, Mrs. Marcus Edward
500 E. Walnut St. Goldsboro
Black, Mrs. George William
1566 Queens Rd., W. Charlotte
Black, Mrs. John Riley, Jr.
212 Jefferson St. Whiteville
Black, Mrs. Kyle Emerson, Acorn Lane, Salisbury
Black, Mrs. Paul Adrian Lawrence
2732 Park Ave. Wilmington
Blackmon, Mrs. Bruce Bernard Buie's Creek
Blackwelder, Mrs. Verne Hamilton
323 S. Mulberry St. Lenoir
Blair, Mrs. Andrew B.
1220 Queens Rd., W. Charlotte
Blair, Mrs. George Walker, Jr.
460 Parkview Dr. Burlington
Blair, Mrs. James Samuel
1116 Cumberland Ave. Gastonia
Blair, Mrs. Mott Parks Marshville

Blake, Mrs. Damon
645 Kingsbury Circle Winston-Salem
Blanchard, Mrs. George Caswell
1701 Brandon Rd. Charlotte
Bland, Mrs. Delmar Earl
289 Canterbury Trail Winston-Salem
Bland, Mrs. William Herbert, 401 West Cary
Blue, Mrs. John Frederick, Brinn Drive, Sanford
Blue, Mrs. Waylon, 2505 Dalrymple Rd., Sanford
Boggs, Mrs. Lawrence Kennedy
2208 Wellesley Ave. Charlotte
Bolin Mrs. Grover Cleveland Jr.
Crescent Drive Smithfield
Bolin, Mrs. Lewis Bryant, 111 Will St., Mt. Airy
Bolon Mrs. Charles Gordon
4733 Wendover Lane Charlotte
Bolt, Mrs. Conway Anderson, Box 368, Marshville
Bolus, Mrs. Michael, 2220 Wheeler Rd., Raleigh
Bond, Mrs. Edward Griffith,
102 Pembroke Circle Edenton
Bond, Mrs. John Pennington
1806 Fairfield Dr. Gastonia
Bond Mrs. Vernard Franklin Jr.
340 Buckingham Rd. Winston-Salem
Bonner Mrs. John Bryan Havens
1100 Riverside Ave. Elizabeth City
Bonner, Mrs. Merle Dumont
203 Kimberly Dr. Greensboro
Bonner Mrs. Octavius Blanchard
408 Edgedale Dr. High Point
Boone, Mrs. John W., Jr.
826 Monroe St. Roanoke Rapids
Boone, Mrs. William Waldo
1001 Gloria Ave. Durham
Borden, Mrs. Richard Winstead
1600 E. Elm St. Goldsboro
Boren Mrs. Richard Benjamin III
813 N. Bridge St. Elkin
Bos, Mrs. John Fremont
1574 Clayton Dr. Charlotte
Bostic Mrs. William Chivous, Jr.
535 E. Main St. Forest City
Bourgeois, Mrs. Michael
1017 Norwood Ave. Durham
Bower, Mrs. Joseph Shelton
1100 N. Queen St. Kinston
Bowles, Mrs. Francis Norman
1400 Shepherd St. Durham
Bowman, Mrs. Earl L.
1101 N. Walnut St. Lumberton
Boyce, Mrs. Oren Douglas, Boyceleyn Rd., Gastonia
Boyce, Mrs. William Henry
939 N. Stratford Rd. Winston-Salem
Boyd, Mrs. Basil Manley, Jr.
1816 Maryland Ave. Charlotte
Boyes, Mrs. James Gordon, Jr.
1163 Country Club Rd. Wilmington
Boyette, Mrs. Ben Robert, Jr.
1508 E. Palm St. Goldsboro
Brabson, Mrs. John Anderson
323 Hempstead Pl. Charlotte
Bradford, Mrs. George Edwin
444 Roslyn Rd. Winston-Salem
Bradford, Mrs. Williamson Ziegler
310 Colville Rd. Charlotte
Bradish, Mrs. Robert F.
1712 Raeford Rd. Fayetteville
Bradley, Mrs. Harold John
105 W. Brentwood Greensboro
Bradley, Mrs. John David, 5 Ravenna Dr., Asheville
Bradshaw, Mrs. Howard Holt
2837 Reynolds Rd. Winston-Salem
Bradsher, Mrs. Arthur Brown
421 Carolina Circle Durham
Bradsher, Mrs. James Donald, Box 168 Roxboro
Brady, Mrs. Charles Eldon, Carthage Rd., Robbins
Brady, Mrs. Walter Morris Morehead City

Branaman, Mrs. Guy Hewitt, Jr.
915 Williamson Dr. ..... Raleigh
Brandon, Mrs. Henry Allen ..... Yadkinville
Brantley, Mrs. Coleman
1803 Wright Ave. ..... Greensboro
Brantley, Mrs. Julian Chisolm, Jr.
1507 Lafayette Ave. ..... Rocky Mount
Brantley, Mrs. Julian Thweatt
1500 Independence Rd. ..... Greensboro
Bream, Mrs. Charles Anthony
211 McCauley St. ..... Chapel Hill
Breeden, Mrs. William Henry
1524 Morganton Rd. ..... Fayetteville
Brenizer, Mrs. Addison Gorgas, Jr.
1301 Providence Rd. ..... Charlotte
Bressler, Mrs. Bernard, 2700 Circle Dr., Durham
Brewer, Mrs. James Street ..... Roseboro
Brian, Mrs. Earl Winfrey
2111 White Oak Rd. ..... Raleigh
Brice, Mrs. George Wilson, Jr.
3961 Arbor Way ..... Charlotte
Bridger, Mrs. Dewey Herbert ..... Bladenboro
Bridges, Mrs. Dwight Thomas ..... Lattimore
Briggs, Mrs. Henry Harrison, Jr.
323 Vanderbilt Rd. ..... Asheville
Brigman, Mrs. Paul Hamer
1005 College Dr. ..... High Point
Brinkhous, Mrs. Kenneth Merle
Box 1020 ..... Chapel Hill
Brinn, Mrs. Thomas Preston
106 Front St. ..... Hertford
Bristow, Mrs. Charles Oliver
504 Fayetteville Rd. ..... Rockingham
Britt, Mrs. Tilman Carlisle, Jr.
130 Rawley Ave. ..... Mt. Airy
Britt, Mrs. Walter S.
Veterans Hospital ..... Fayetteville
Brittain, Mrs. Lowell Ellis ..... Huntersville
Brockmann, Mrs. Harry Lyndon
912 Fairway Dr. ..... High Point
Brooks, Mrs. Ernest Bruce
2853 Bitting Rd. ..... Winston-Salem
Brooks, Mrs. Frederick Philips
Greenville Blvd. ..... Greenville
Brooks, Mrs. Martin Luther, Box 141 ..... Pembroke
Brooks, Mrs. Ralph Elbert
1303 Rainey St. ..... Burlington
Brooks, Mrs. William Lester, Jr.
2110 Queens Rd., W. ..... Charlotte
Broughton, Mrs. Arthur Calvin, Jr.
3008 Eton Rd. ..... Raleigh
Broun, Mrs. Matthew Singleton
606 Roanoke Ave. ..... Roanoke Rapids
Brouse, Mrs. Ivan Edwin
Masonboro Sound ..... Wilmington
Brown, Mrs. Alan Reid ..... Waynesville
Brown, Mrs. Charles William
227 Fenton Place ..... Charlotte
Brown, Mrs. Frank Reid
1103 Country Club Dr. ..... Greensboro
Brown, Mrs. George Wallace, Jr. ..... Waynesville
Brown, Mrs. Gerald Joseph ..... Westfield
Brown, Mrs. Ivan W., Jr., 1709 Vista Dr., Durham
Brown, Mrs. James Walter, Jr.
33 Grandview Dr. ..... Concord
Brown, Mrs. Kermit English
Chunns Cove Rd. ..... Asheville
Brown, Mrs. Landis G. ..... Southport
Brown, Mrs. William Thomas
1308 Pine St. ..... Laurinburg
Bruce, Mrs. James Crawford
2902 Dublin ..... Greensboro
Brunson, Mrs. Edward Porcher
804 Pee Dee Ave. ..... Albemarle
Bruton, Mrs. Charles Wilson ..... Troy
Bryan, Mrs. Thomas R., Jr.
Finley Park ..... North Wilkesboro
Buffaloe, Mrs. William Joseph
906 Tate Dr. ..... Raleigh
Bugg, Mrs. Charles Paulett
320 W. Drewry Lane ..... Raleigh
Bugg, Mrs. Everett I., Jr.
1544 Hermitage Ct. ..... Durham
Buie, Mrs. Roderick Mark, Sr.
119 Kensington Rd. ..... Greensboro
Buie, Mrs. Roderick Mark, Jr.
108 Elgin Place ..... Greensboro
Bullock, Mrs. Duncan Douglas, Sr. ..... Rowland
Bumgarner, Mrs. John Reed
2101 Mimosa Dr. ..... Greensboro
Bunce, Mrs. Paul Leslie, Route 3 ..... Chapel Hill
Bundy, Mrs. James Bizzell
433 McRae Dr. ..... Fayetteville
Bundy, Mrs. William Lumsden
Finley Park ..... North Wilkesboro
Bunn, Mrs. David Glenn, Maple St. ..... Whiteville
Bunn, Mrs. Richard Wilmot
411 Plymouth Ave. ..... Winston-Salem
Burleson, Mrs. Robert Joe
36 Elk Mountain Scenic Hwy. ..... Asheville
Burnett, Mrs. Charles Hoyt
Laurel Hill Road ..... Chapel Hill
Burnett, Mrs. Thomas J. M.
4756 Stafford Circle ..... Charlotte
Burnette, Mrs. Harvey Loraine, Jr. ..... Morven
Burns, Mrs. Joseph Eugene
41 Ingleside Dr. ..... Concord
Burns, Mrs. Stanley Sherman, Jr.
2312 Pembroke Ave. ..... Charlotte
Burt, Mrs. Richard Lafayette
2801 Robin Hood Rd. ..... Winston-Salem
Burwell, Mrs. John Cole, Jr.
110 Homewood Dr. ..... Greensboro
Busby, Mrs. George Francis
Confederate Ave. ..... Salisbury
Busby, Mrs. Julian, 401 Idlewood Dr., Kannapolis
Busby, Mrs. Trent, 530 Confederate Ave., Salisbury
Busse, Mrs. Ewald W.
1423 Woodburn Rd. ..... Durham
Butler, Mrs. Radford Norman
810 Clovelly Rd. ..... Winston-Salem
Butler, Mrs. Raymond Kenneth ..... Waynesville
Byerly, Mrs. Frederick Lee
2000 Robin Hood Rd. ..... Winston-Salem
Byerly, Mrs. James Hampton, 620 Carr St., Sanford
Byerly, Mrs. Wesley Grimes, Jr.
546 Sixth St., N. W. ..... Hickory
Byerly, Mrs. Wesley Grimes, Sr.
211 Highland Ave. ..... Lenoir
Byrd, Mrs. Charles William
409 S. Orange Ave. ..... Dunn
Byrd, Mrs. William Carey
State Hospital ..... Morganton
Byrnes, Mrs. Thomas Henderson
919 Mt. Vernon Ave. ..... Charlotte
Byrum, Mrs. Clifford Conwell
2616 Wells Ave. ..... Raleigh

Caddell, Mrs. H. Morris
Pinehurst-Pinebluff Rd. ..... Aberdeen
Cain, Mrs. Frank Coral, Jr., Pinola Ave., Gastonia
Calder, Mrs. Duncan Graham, Jr.
42 N. Union St. ..... Concord
Caldwell, Mrs. Eston Robert, Jr.
116 N. Race St. ..... Statesville
Caldwell, Mrs. Jesse Burgoyne
1307 Park Lane ..... Gastonia
Caldwell, Mrs. Lawrence McClure
406 S. College Ave. ..... Newton
Caldwell, Mrs. Robert M.
224 S. Main St. ..... Mt. Airy
Caldwell, Mrs. Robert Sims
520 2nd St., N. W. ..... Hickory
Callaway, Mrs. Jasper Lamar
828 Anderson St. ..... Durham

Camblos, Mrs. Joshua Fry Bullitt
17 Forest Rd. ..... Asheville
Cameron, Mrs. George
307 Westview Drive ..... Fayetteville
Cameron, Mrs. Joseph Harold
1217 Crescent Ave. ..... Gastonia
Camp, Mrs. Edward Hays ..... Waynesville
Campbell, Mrs. Frank Highsmith
320 Valley Rd. ..... Fayetteville
Campbell, Mrs. James Melvin
2115 Yost Ave. ..... Salisbury
Campbell, Mrs. Paul Curtis, Jr.
2215 Meadowwood Rd. ..... Fayetteville
Carpenter, Mrs. Coy Cornelius
Route 1, Bethabara Road ..... Winston-Salem
Carpenter, Mrs. Harry M.
713 Austin Lane ..... Winston-Salem
Carr, Mrs. Chalmers Rankin
1715 Queens Rd. ..... Charlotte
Carr, Mrs. Edward Sleight
3210 Forsyth ..... Greensboro
Carrington, Mrs. George Lunsford
139 Piedmont Way ..... Burlington
Carroll, Mrs. Charles Fisher
263 Grandview Dr. ..... Concord
Carroll, Mrs. Fountain Williams ..... Hookerton
Carroll, Mrs. Francis Murray ..... Chadbourn
Carter, Mrs. Francis Bayard
2111 Myrtle Dr. ..... Durham
Carter, Mrs. Needham Battle
226 Timberlane Road ..... Rocky Mount
Carter, Mrs. Warren Dallas ..... Wadesboro
Carver, Mrs. Gordon Malone, Jr.
2214 Cranford Rd. ..... Durham
Casstevens, Mrs. John Claude
130 Pine Valley Cl. ..... Winston-Salem
Cates, Mrs. Banks Raleigh, Jr.
2833 Sunset Dr. ..... Charlotte
Cathell, Mrs. James L., State Hospital ..... Butner
Caughran, Mrs. John H.
4400 Halstead Dr. ..... Charlotte
Causey, Mrs. Andrew Jackson
210 Valley Stream Rd. ..... Statesville
Caveness, Mrs. Zebulon Marvin
1804 Hillsboro St. ..... Raleigh
Caviness, Mrs. Verne Strudwick
913 Vance St. ..... Raleigh
Cayer, Mrs. David
2754 Robin Hood Rd. ..... Winston-Salem
Cecil, Mrs. Richard C.
2314 Gunston Court ..... Fayetteville
Cekada, Mrs. Emil Bogomir, 915 Green St., Durham
Cernugel, Mrs. Albert Peter ..... Chadbourn
Chambers, Mrs. Robert Edward
313 Ruby Lane ..... Gastonia
Chamblee, Mrs. John Sigma
607 E. Church St. ..... Nashville
Chandler, Mrs. Edgar Ted
28 7th Ave., N. E. ..... Hickory
Chandler, Mrs. Weldon Porter
Box 458 ..... Weaverville
Chapin, Mrs. John Harmon ..... Benson
Chapman, Mrs. Charles Granger
6134 Deveron Dr. ..... Charlotte
Chapman, Mrs. Edwin James
264 Lakeshore Dr. ..... Asheville
Chapman, Mrs. Jesse Pugh, Jr.
81 Sheridan Rd. ..... Asheville
Charlton, Mrs. John David
911 Magnolia St. ..... Greensboro
Chastain, Mrs. Loren Lee ..... Cherryville
Cheek, Mrs. John Merritt, Jr.
1025 Sycamore St. ..... Durham
Cheek, Mrs. Kenneth Maurice
402 E. Farriss ..... High Point
Cherny, Mrs. Walter B.
1510 Carolina Ave. ..... Durham
Chesson, Mrs. Arthur Saunders, Jr.
310 S. Andrews Ave. ..... Goldsboro
Chiles, Mrs. Noah Hampton
1031 Wellington ..... High Point
Citron, Mrs. David Sanford
2100 Cumberland Ave. ..... Charlotte
Clapp, Mrs. Hubert Lee
Eastwood Ave. ..... Swannanoa
Clark, Mrs. DeWitt Duncan, Box 725, ... Clarkton
Clark, Mrs. Douglas Hendon
207 W. 26th St. ..... Lumberton
Clark, Mrs. Harold Stevens
9 Lakewood Dr. ..... Asheville
Clark, Mrs. Henry Toole, Jr., Box 1370, Chapel Hill
Clark, Mrs. Milton Stephen
1808 E. Walnut ..... Goldsboro
Clark, Mrs. Patrick Francis
208 Cumberland ..... Asheville
Clarke, Mrs. Len Gordon
606 Fieldcrest Rd. ..... Draper
Clarke, Mrs. William Lowe, Jr.
401 7th Ave. Pl., N. W. ..... Hickory
Clary, Mrs. William Thomas
507 Chancery Pl. ..... Greensboro
Clay, Mrs. Thomas Barger, Jr.
300 N. Third Ave. ..... Mayodan
Clayton, Mrs. Eugene Cook
17 St. Charles Pl. ..... Asheville
Cleaver, Mrs. H. DeHaven
213 Cornwallis Rd. ..... Durham
Clinton, Mrs. Roland Smith
1305 Fairfield Dr. ..... Gastonia
Clippinger, Mrs. Frank W.
2511 Pickett Rd. ..... Durham
Cloninger, Mrs. Charles Edgar ..... Conover
Cloninger, Mrs. Giles Lathern
301 Dogwood Lane ..... Hamlet
Cloninger, Mrs. Kenneth Lee
Westlake Hills ..... Newton
Cloninger, Mrs. Rowell Connor
Westfield Rd. ..... Shelby
Clutts, Mrs. George Robert
227 N. Park Dr. ..... Greensboro
Cobey, Mrs. William Gray
527 Clement Ave. ..... Charlotte
Cochcroft, Mrs. Roy Leicester
217 W. Washington Ave. ..... Bessemer City
Cochran, Mrs. John L., Jr.
413 N. Elm St. ..... Asheboro
Cochrane, Mrs. Fred Richard, Jr.
1614 Maryland Ave. ..... Charlotte
Codington, Mrs. John Bonnell
2715 Columbia Ave. ..... Wilmington
Coffee, Mrs. Archie Thomas, Jr.
2717 Chilton Pl. ..... Charlotte
Coffman, Mrs. Selby, Longmeadow Rd. ..... Greenville
Cogdell, Mrs. David Melvin
2827 Skye Dr. ..... Fayetteville
Coggeshall, Mrs. Allen Bancroft
109 Beverly Pl. ..... Greensboro
Cohen, Mrs. Sanford Irwin
1527 Woodburn Rd. ..... Durham
Coker, Mrs. Robert Ervin, Jr.
810 Christopher Rd. ..... Chapel Hill
Cole, Mrs. Herman Alfonse
211 E. Blanche ..... Clayton
Cole, Mrs. Robert Hickman
1537 Coventry Rd. ..... Charlotte
Cole, Mrs. Walter Francis
201 E. Avondale ..... Greensboro
Coleman, Mrs. Lester Livingston
428 Sixth St., N. W. ..... Hickory
Coley, Mrs. Elwood Brogden
602 W. 31st St. ..... Lumberton
Collett, Mrs. James Rountree
W. Union St. ..... Morganton
Collins, Mrs. Warren James, 713 Ridgeview, Shelby

Combs, Mrs. Fielding
438 Carolina Circle ..... Winston-Salem
Combs, Mrs. Joseph John
2125 White Oak Rd. ..... Raleigh
Compton, Mrs. John Wallace
608 S. Oleander Ave. ..... Goldsboro
Cook, Mrs. Henry Lilly, Jr.
Irving Park Manor ..... Greensboro
Cook, Mrs. Joseph Lindsay
Nutbush Rd. ..... Greensboro
Cook, Mrs. William Eugene
115 S. Churchill Dr. ..... Fayetteville
Cooke, Mrs. Grady Carlyle
Bonham Heights ..... Morehead City
Cooke, Mrs. Hershall Marcus
Route 1, Box 227 ..... Boone
Cooke, Mrs. Quinton Edwin
212 E. High St. ..... Murfreesboro
Cooke, Mrs. Ralph M., E. Main St. ..... Elkin
Cooley, Mrs. Samuel Studdiford
221 New Bern Ave. ..... Black Mountain
Cooper, Mrs. Albert Derwin
1006 Dacian Ave. ..... Durham
Cooper, Mrs. Frank Benton
1129 Emerald St. ..... Salisbury
Cooper, Mrs. George Marion
411 Marlowe Road ..... Raleigh
Coppedge, Mrs. Thomas Oliver, Jr.
112 Cedar Lane, Route 2 ..... Charlotte
Coppridge, Mrs. James Alston
2020 Wilson St. ..... Durham
Coppridge, Mrs. William Maurice
1024 W. Forest Hills Blvd. ..... Durham
Corbett, Mrs. Clarence Lee
W. Cumberland St. ..... Dunn
Corbett, Mrs. James Patrick ..... Swansboro
Corbin, Mrs. George Wesley, Jr. ..... Rolesville
Cordell, Mrs. Alfred Robert
963 Kenleigh Circle ..... Winston-Salem
Cornwell, Mrs. Abner Milton
825 S. Aspen St. ..... Lincolnton
Corpening, Mrs. Joseph Durham
228 Rutherford St. ..... Salisbury
Corpening, Mrs. Oscar J. ..... Granite Falls
Corpening, Mrs. William Nye ..... Granite Falls
Correll, Mrs. Earl Eugene
1603 Eastwood Drive ..... Kannapolis
Cosgrove, Mrs. Kenneth Edward
306 Laurel Dr. ..... Hendersonville
Costner, Mrs. Walter Vance
501 N. Cedar St. ..... Lincolnton
Coughlin, Mrs. Joyce Desmond
150 Cherokee Rd. ..... Asheville
Council, Mrs. Albert Barbee
Von Ruck St. ..... Spray
Couturier, Mrs. Maurice George, Sr. ..... Reidsville
Covington, Mrs. Furman Payne
216 Forsyth St. ..... Thomasville
Covington, Mrs. James Madison, Sr. ..... Wadesboro
Covington, Mrs. James Madison, Jr.
Morven Road ..... Wadesboro
Covington, Mrs. John Malloy Clayton
324 Jackson St. ..... Roanoke Rapids
Covington, Mrs. Martin Cade
2107 Woodland Ave. ..... Sanford
Cox, Mrs. Alexander McNeil
325 Market St. ..... Madison
Cox, Mrs. Samuel Clements
8 E. Bayshore Blvd. ..... Jacksonville
Cox, Mrs. William Foscue
2722 Reynolds Rd. ..... Winston-Salem
Cozart, Mrs. Benjamin Franklin
Box 1289 ..... Reidsville
Cozart, Mrs. Wiley Holt
Box 327 ..... Fuquay Springs
Cozart, Mrs. Wiley S.
333 S. Main ..... Fuquay Springs
Craddock, Mrs. John Goodwin
1501 Anderson St. ..... Wilson
Craig, Mrs. Robert Lawrence
382 Montford Ave. ..... Asheville
Craig, Mrs. William Kenneth ..... Enfield
Crandell, Mrs. Daniel LeRoy
755 Pine Valley Rd. ..... Winston-Salem
Crane, Mrs. George Levering
2028 Pershing St. ..... Durham
Crane, Mrs. George William, Jr.
2618 Augusta Dr. ..... Durham
Craven, Mrs. Frederick Thorns
29 Ravine Ave. ..... Concord
Crawford, Mrs. Robert Hope
216 S. Ridgecrest Ave. ..... Rutherfordton
Crawford, Mrs. Robert Orr, Jr.
P. O. Box 483 ..... Claremont
Crawford, Mrs. William Jennings
1500 E. Ash St. ..... Goldsboro
Crawley, Mrs. Sam Jones, Jr. ..... Boiling Springs
Creelick, Mrs. Robert Nowell
1200 Anderson St. ..... Durham
Creech, Mrs. Lemuel Underwood
220 Edgedale Dr. ..... High Point
Creed, Mrs. George Otis, Johns Rd. ..... Laurinburg
Crescenzo, Mrs. Victor M.
Belmont Drive ..... Reidsville
Crisp, Mrs. Sellers Mark
1201 E. 5th St. ..... Greenville
Crissman, Mrs. Clinton S., Chapel Hill Rd., Graham
Cronland, Mrs. Murphy Allen
226 W. Pine ..... Lincolnton
Croom, Mrs. Arthur Bascom
1102 Greenway Dr. ..... High Point
Croom, Mrs. Robert DeVane, Jr. ..... Maxton
Crosby, Mrs. James Foster
5015 Park Road ..... Charlotte
Crosby, Mrs. Lewis Pearce ..... Reidsville
Cross, Mrs. Almon Rufus
414 Hillcrest Dr. ..... High Point
Cross, Mrs. Robert Vandervoort
920 Fairway Dr. ..... High Point
Crouch, Mrs. Auley McRae, Sr.
520 Dock St. ..... Wilmington
Crouch, Mrs. Auley McRae, Jr.
1419 S. Live Oak Parkway ..... Wilmington
Crouch, Mrs. Walter Lee
1211 S. Live Oak Parkway ..... Wilmington
Crow, Mrs. Samuel Leslie
12 N. Kensington Rd. ..... Asheville
Crowell, Mrs. James Allen
1529 E. Morehead St. ..... Charlotte
Crowell, Mrs. Lester Avant, Jr.
413 S. Aspen St. ..... Lincolnton
Crumpler, Mrs. James Fulton
1409 West Haven Blvd. ..... Rocky Mount
Crumpler, Mrs. Paul
401 Lafayette St. ..... Clinton
Crumpler, Mrs. Warren Harding
N. Johnson St. ..... Mt. Olive
Crutchfield, Mrs. Andrew Jackson
300 Plymouth Ave. ..... Winston-Salem
Cubberley, Mrs. Charles Lamb, Jr.
505 Lafayette Dr. ..... Wilson
Culbreth, Mrs. George Gordon
2228 Queens Rd., E. ..... Charlotte
Curnen, Mrs. Edward C., Jr.
322 W. University Dr. ..... Chapel Hill
Currie, Mrs. Daniel Smith, Jr.
302 Churchill Dr. ..... Fayetteville
Currie, Mrs. Daniel Smith, Sr. ..... Parkton
Curry, Mrs. Clayton Smith
2701 Bucknell Ave. ..... Charlotte
Curtis, Mrs. Thomas E.
Sherwood Forest ..... Chapel Hill
Cutchin, Mrs. Joseph Henry, Sr.
Box 202 ..... Whitakers
Cutchin, Mrs. Joseph Henry, Jr. ..... Sherrill's Ford

Cutri, Mrs. Joseph John
Graylyn Court ..... Winston-Salem
Dale, Mrs. Frederick Payne
503 Rhodes Ave. ..... Kinston
Dalton, Mrs. Horace Milton
1705 Cambridge Dr. ..... Kinston
Daly, Mrs. Roswell Bernard ..... Waxhaw
Dameron, Mrs. Thomas Barker, Jr.
2710 E. Rothgeb Dr. ..... Raleigh
Daniel, Mrs. Crowell Turner, Jr.
330 Pinecrest Dr. ..... Fayetteville
Daniel, Mrs. Thomas Brantley
3231 Sussex Rd. ..... Raleigh
Daniel, Mrs. Thomas Manning
524 S. Fourth St. ..... Smithfield
Daniel, Mrs. Walter Eugene
2115 Roswell Ave. ..... Charlotte
Daniels, Mrs. Robert Edward
23 Vance Crescent ..... West Asheville
Darden, Mrs. James Lee, Jr.
1000 Pembroke Ave. ..... Ahoskie
Daughtridge, Mrs. Arthur Lee
501 Shady Circle Dr. ..... Rocky Mount
Daughtridge, Mrs. Griffin Caswell
526 Marigold St. ..... Rocky Mount
Davant, Mrs. Charles, Chestnut Dr., Blowing Rock
Davenport, Mrs. Carlton Alderman
207 Front St. ..... Hertford
Davenport, Mrs. Clifton ..... Lake Waccamaw
Davidson, Mrs. Alan, Morehead Rd. ..... New Bern
Davidson, Mrs. James Hubert
2200 Sprunt St. ..... Durham
Davis, Mrs. Courtland Harwell, Jr.
841 Westover Ave. ..... Winston-Salem
Davis, Mrs. David A., Kings Mill Rd., Chapel Hill
Davis, Mrs. Jack Beason ..... Waynesville
Davis, Mrs. James Evans, 7 Beverly Dr., Durham
Davis, Mrs. James Matheson ..... Wadesboro
Davis, Mrs. John Woodrow
Route 5, Box 509 ..... Hickory
Davis, Mrs. Joseph Franklin
Box 6291 Summit Station ..... Greensboro
Davis, Mrs. Junius Weeks, Jr.
Trent Shores ..... New Bern
Davis, Mrs. Philip Bibb
807 Florham Ave. ..... High Point
Davis, Mrs. Richard Boyd
122 S. Green ..... Greensboro
Davis, Mrs. Rufus Jackson, Lakewood, Cramerton
Davis, Mrs. Wayne Edward
321 Avalon Road ..... Winston-Salem
Davis, Mrs. William Hersey, Jr.
723 N. Stratford Rd. ..... Winston-Salem
Davison, Mrs. Wilburt Cornell
3004 Norwich Way ..... Durham
Dawson, Mrs. James Nelson ..... Acme-Delco
Deaton, Mrs. Paul McNeely
581 Greenway Dr. ..... Statesville
Deaton, Mrs. William Ralph, Jr.
101 Elgin Place ..... Greensboro
DeCamp, Mrs. Allen Ledyard
1830 Cassamia Pl. ..... Charlotte
Deeds, Mrs. Charles Ross
Haywood Rd. ..... Hendersonville
DeWolfe, Mrs. Phillip William,
Box 106 ..... Leaksville
Dick, Mrs. Frederick William
354 Bost St. ..... Statesville
Dick, Mrs. Macdonald
3005 Norwich, Hope Valley ..... Durham
Dickerson, Mrs. Andrew Jackson ..... Waynesville
Dickie, Mrs. James William
3003 Wayne Dr. ..... Wilmington
Dickson, Mrs. Brice Templeton, Jr.
1436 Fern Forest Drive ..... Gastonia
Dickson, Mrs. Malcolm Shields
1903 Woodland Ave. ..... Burlington
Dillard, Mrs. Sam Booker
1309 Biltmore Dr. ..... Charlotte
Dixon, Mrs. George Grady
503 Snow Hill St. ..... Ayden
Dixon, Mrs. Philip Lafayette, Jr.
1 Bayshore Blvd., E. ..... Jacksonville
Dobson, Mrs. Richard L.
14 Brandon Rd. ..... Chapel Hill
Doffermyre, Mrs. Luther Randolph
W. Harnett St. ..... Dunn
Donald, Mrs. William Blanton, Jr.
603 Rockspring Rd. ..... High Point
Donner, Mrs. Paul Gartrell
2201 Old Sardis Rd. ..... Charlotte
Dorenbusch, Mrs. Alfred A.
2734 Hampton Ave. ..... Charlotte
Dorman, Mrs. Bruce Hugh
Greenville Sound ..... Wilmington
Dorsett, Mrs. John Dewey
143 Hamilton Rd. ..... Chapel Hill
Douglas, Mrs. John Munroe
400 Ferncliff ..... Charlotte
Dovenmuehle, Mrs. Robert Henry
3527 Hamstead Court ..... Durham
Downs, Mrs. Kenneth Ray
4112 Barmettler Dr. ..... Charlotte
Downs, Mrs. Posey Edgar, Jr.
101 Placid Place ..... Charlotte
Doyle, Mrs. Owen William
906 Dover Rd. ..... Greensboro
Drake, Mrs. Benjamin Michael
1310 Jackson Rd. ..... Gastonia
Drake, Mrs. David Ewing
2616 Bennington Rd. ..... Fayetteville
Drummond, Mrs. Charles Stitt
2928 Windsor Rd. ..... Winston-Salem
Duckett, Mrs. Charles Howard ..... Canton
Duckett, Mrs. Virgil Howard ..... Canton
Dudley, Mrs. Council C., Jr. ..... Jonesville
Dugger, Mrs. Gordon S.
UNC Medical School ..... Chapel Hill
Dula, Mrs. Frederick Mast
214 Hibriten St. ..... Lenoir
Dunn, Mrs. Richard Barry
1014 N. Elm St. ..... Greensboro
Dunning, Mrs. Everett Jackson
2501 Danbury St. ..... Charlotte
Durham, Mrs. Carey Winston
209 W. Ridgeway Dr. ..... Greensboro
Dyer, Mrs. David Patterson ..... Waynesville
Eagle, Mrs. James Carr, 418 Carolina Ave., Spencer
Eagle, Mrs. Watt Weems
804 Anderson St. ..... Durham
Eagles, Mrs. Charles Sidney ..... Saratoga
Early, Mrs. Ira Gordon
2510 Bitting Rd. ..... Winston-Salem
Easom, Mrs. Herman Franklin
508 Mt. Vernon Dr. ..... Wilson
Eastwood, Mrs. Frederick Thomas
2708 Lakeview Dr. ..... Raleigh
Eaves, Mrs. Rupert Spencer
611 N. Washington ..... Rutherfordton
Eckbert, Mrs. William Fox, Southwood ..... Gastonia
Eckerson, Mrs. Charles ..... Troy
Eddinger, Mrs. Charles Frederick, Box 45, Spencer
Eddins, Mrs. George Edgar, Jr.
Norwood Rd. ..... Albemarle
Edgerton, Mrs. Glenn Soulders
325 Cherokee Pl. ..... Charlotte
Edwards, Mrs. Charles Daniel
418 E. 12th St. ..... Washington
Edwards, Mrs. Vertie D. ..... Stokesdale
Egerton, Mrs. Courtney David
2528 York Rd. ..... Raleigh
Elesha, Mrs. William
3040 Briarcliffe Rd. ..... Winston-Salem
Elfmon, Mrs. Samuel Leon
117 Stedman St. ..... Fayetteville

Ellington, Mrs. Amzi Jefferson, Jr.
419 Fountain Place ..... Burlington
Elliott, Mrs. Avon Hall
607 Colonial Drive ..... Wilmington
Elliott, Mrs. John Palmer, Greenway Drive, Spray
Elliott, Mrs. Joseph Alexander, Sr.
2700 Sherwood Ave. ..... Charlotte
Elliott, Mrs. Joseph Alexander, Jr.
2224 Sanford Lane ..... Charlotte
Elliott, Mrs. William McBrayer
West View ..... Forest City
Epple, Mrs. Kenneth H.
1518 Liberty Drive ..... Greensboro
Erb, Mrs. Norris Scribner, 8 Oak Rd. ..... Salisbury
Erdman, Mrs. Lawrence Huntington
P. O. Box 283 ..... Bridgeton
Ernst, Mrs. Henry Edwin
97 Ingleside Dr. ..... Concord
Ervin, Mrs. John Witherspoon
State Hospital ..... Morganton
Erwin, Mrs. Evan Alexander, Jr.
S. Main ..... Laurinburg
Espey, Mrs. Dan, Jr.
454 5th St., S. E. ..... Hickory
Estes, Mrs. Edward Harvey, Jr.
3542 Hamstead Court ..... Durham
Etherington, Mrs. John Lawrence
1703 Evergreen Ave. ..... Goldsboro

Fagan, Mrs. Harry, Jr.
2508 Oxford Rd. ..... Raleigh
Faison, Mrs. Elias Sampson
1825 Providence Rd. ..... Charlotte
Fales, Mrs. Robert Martin
153 Renovah Circle ..... Wilmington
Falls, Mrs. Fred, 855 W. Marion St. ..... Shelby
Falvo ,Mrs. Samuel Catanzaro
716 Maybank Drive ..... Hendersonville
Farley, Mrs. William Winfree
2625 Dover Rd. ..... Raleigh
Farmer, Mrs. Thomas Wholsen
Mason Farm Rd. ..... Chapel Hill
Farmer, Mrs. William Anderson
2841 Skye Dr. ..... Fayetteville
Farmer, Mrs. William Dempsey
1011 Country Club Dr. ..... Greensboro
Farmer, Mrs. Woodard Eason
27 Park Road ..... Asheville
Faulk, Mrs. James Grady
1208 E. Franklin ..... Monroe
Feezor, Mrs. Charles Noel
6 Pine Tree Rd. ..... Salisbury
Feldman, Mrs. Leon Henry
6 N. Kensington Rd. ..... Asheville
Felton, Mrs. Robert Lee, Jr., Box 176, Carthage
Felts, Mrs. John Harvey, Jr.
245 New Drive ..... Winston-Salem
Fender, Mrs. James Earle ..... Waynesville
Ferguson, Mrs. George Burton
3938 Dover Rd., Hope Valley ..... Durham
Ferrell, Mrs. John Atkinson
Apt. 8-B, Carolina Hotel ..... Raleigh
Fesperman, Mrs. Joseph Claude
West College St. ..... Stanley
Fetter, Mrs. Bernard Frank
Summerset Drive ..... Durham
Feuer, Mrs. Abe Lawrence
1006 Fairfield Dr. ..... Gastonia
Fewell, Mrs. Richard Alexander
506 Hillcrest Rd. ..... Burlington
Ficklin, Mrs. Conway
908 Live Oak Parkway ..... Wilmington
Field, Mrs. Bob Lewis, Box 557 ..... Salisbury
Fields, Mrs. Leonard Earl
Box 788, Hidden Hills ..... Chapel Hill
Fike, Mrs. Ralph Llewellyn
901 Raleigh Rd. ..... Wilson
Fincher, Mrs. Robert Charles, Jr.
107 Spencer St. ..... High Point
Finley, Mrs. Charles Francis
2323 Morganton Rd. ..... Fayetteville
Fish, Mrs. Harry Gustav, Jr.
1116 Long Ave. ..... Rocky Mount
Fisher, Mrs. George Walton, Jr.
2612 Edgewater Dr. ..... Fayetteville
Fitz, Mrs. Thomas Edmunds
423 10th St. Dr. ..... Hickory
Fitzgerald, Mrs. Charles Edmund
415 E. Wilson St. ..... Farmville
Fitzgerald, Mrs. John Dean
210 Crestwood Dr. ..... Roxboro
Fitzgerald, Mrs. John Hill, Jr.
217 Buff St. ..... Lincolnton
Fitzgerald, Mrs. Robert Greeson, Jr.
Box 256 ..... Roxboro
Fleetwood, Mrs. Joseph Anderton, Jr. ..... Conway
Fleetwood, Mrs. Joseph Anderton, Sr. ..... Conway
Fleishman, Mrs. Malcolm
130 Herndon St. ..... Fayetteville
Fleming, Mrs. Lawrence Edwin
1116 Providence Rd. ..... Charlotte
Fleming, Mrs. Major Ivy
104 S. Franklin St. ..... Rocky Mount
Fleming, Mrs. Ralph Gibson
23 Beverly Dr. ..... Durham
Fleming, Mrs. Samuel Wallace ..... Elm City
Flippin, Mrs. James Meigs ..... Pilot Mountain
Flowe, Mrs. Benjamin Hugh, 804 Wilmar, Concord
Floyd, Mrs. Anderson Gayle
N. Thompson St. ..... Whiteville
Floyd, Mrs. Hal Stanfield
Lake View Rd. ..... Fairmont
Floyd, Mrs. Walter, 2011 Woodrow St. ..... Durham
Floyd, Mrs. William Russell
Mt. Pleasant Highway ..... Concord
Flythe, Mrs. William Henry
809 Hillcrest Dr. ..... High Point
Fogleman, Mrs. Ross Lee, Jr.
904 W. Highland Ave. ..... Kinston
Follo, Mrs. Paige Bill, 1709 Efland Dr., Greensboro
Fondren, Mrs. Frank
302 Jackson St. ..... Roanoke Rapids
Forbes, Mrs. Gus Evans, Park Circle, Laurinburg
Forbes, Mrs. Thomas Earl
Country Club Drive ..... Reidsville
Forbus, Mrs. Wiley Davis, 3309 Devon Rd., Durham
Forrest, Mrs. William W.
1001 Montpelier Dr. ..... Greensboro
Forsyth, Mrs. Harry Francis
434 Westview Dr. ..... Winston-Salem
Fortescue, Mrs. William Nicholas
Kanuga Rd. ..... Hendersonville
Fortney, Mrs. Austin Powell ..... Jamestown
Fortune, Mrs. Benjamin Fletcher
906 Cornwallis Dr. ..... Greensboro
Foster, Mrs. John W.
294 W. End Blvd. ..... Winston-Salem
Foster, Mrs. Malcolm Tennyson
114 Stedman St. ..... Fayetteville
Foushee, Mrs. J. Henry Smith, Jr.
748 Barnesdale Rd. ..... Winston-Salem
Fowler, Mrs. Henry Jackson
Box 403 ..... Walnut Cove
Fowler, Mrs. John A.
1409 Woodburn Rd. ..... Durham
Fox, Mrs. Dennis Bryan, McGill Dr., Albemarle
Fox, Mrs. Norman Albright, Jr.
Friendly Rd. ..... Guilford College
Fox, Mrs. Norman Albright, Sr.
Friendly Rd. ..... Guilford College
Fox, Mrs. Powell Graham
2910 Fairview Rd. ..... Raleigh
Fox, Mrs. Powell Graham, Jr.
3013 Medlin Drive ..... Raleigh
Fox, Mrs. Robert Eugene
1011 E. Main St. ..... Albemarle

Fox, Mrs. William Morgan
435 Charlotte Dr. Fayetteville
Fraasa, Mrs. Robert Conrad
1226 Tarrington Dr. Charlotte
Franklin, Mrs. Ernest Washington
1141 Linganore Pl. Charlotte
Franklin, Mrs. Robert Benjamin Clinton
227 Rockford St. Mt. Airy
Frazier, Mrs. Claude Albee
14 Buena Vista Rd. Asheville
Frazier, Mrs. John Wesley, Jr.
Pine Tree Rd. Salisbury
Freedman, Mrs. Arthur
1305 Hobbs Rd. Greensboro
Freeman, Mrs. Percy Lee
1018 Paramount Circle Gastonia
Freeman, Mrs. Roy Oscar Jefferson
Freeman, Mrs. William Harrison
611 Yadkin St. Albemarle
Freeman, Mrs. William Talmadge
311 Vanderbilt Rd. Asheville
Fritz, Mrs. Olin Grady Walkertown
Fritz, Mrs. William Abel
636 Third St., N. E. Hickory
Frizelle, Mrs. Mark Twain, 507 S. Lee St. Ayden
Frohbose, Mrs. William Joseph
1524 Beal St. Rocky Mount
Frye, Mrs. Glenn Raymer
539 N. Center St. Hickory
Fulcher, Mrs. Luther Beaufort
Fuller, Mrs. David H.
State Hospital Raleigh
Fuller, Mrs. Henry Fleming
1302 Walker Dr. Kinston
Fulp, Mrs. James Francis
Bryan Street Stoneyville
Futch, Mrs. William Alexander
217 Brentwood Ave. Jacksonville

Gadd, Mrs. Duwayne Douglas
Linden Road Pinehurst
Gainey, Mrs. John White, Jr. Morehead City
Gallant, Mrs. Robert Miller
809 Central Ave. Charlotte
Galloway, Mrs. James Hervey
200 Shepherd St. Raleigh
Galusha, Mrs. Bryant Leroy
1419 Ferncliff Charlotte
Gamble, Mrs. John Reeves, Jr.
Box 270 Lincolnton
Gambrel, Mrs. Ralph
546 Wilkesboro St. Mocksville
Garber, Mrs. Edgar Clyde, Jr.
1810 Lakeshore Dr. Fayetteville
Garrard, Mrs. Robert Lemley
101 N. Park Dr. Greensboro
Garrenton, Mrs. Connell George Bethel
Garrett, Mrs. John Bostian Walkertown
Garrett, Mrs. Norman Hessen, Jr.
3932 Madison Ave. Greensboro
Garrison, Mrs. Paul Leslie
1837 Buena Vista Winston-Salem
Garrison, Mrs. Ralph Bernard, Cheraw Rd., Hamlet
Garrison, Mrs. Robert Lee
2118 Beverly Dr. Charlotte
Garvey, Mrs. Fred Kesler
440 Fairfax Dr. Winston-Salem
Garvey, Mrs. Robert Roby
Boone Highway Blowing Rock
Gaskin Mrs. Ernest Reed
1000 Nottingham Dr. Charlotte
Gaskin, Mrs. Lewis Reed
274 N. Fourth St. Albemarle
Gaskin, Dr. Madge Baker
265 N. Third St. Albemarle
Gaul, Mrs. John Stuart, Jr.
2010 Sharon Lane Charlotte
Gaul, Mrs. John Stuart, Sr.
2119 Norton Rd. Charlotte

Gay, Mrs. Charles Houston
143 Huntley Pl. Charlotte
Geddie, Mrs. Kenneth Baxter
1121 Rotary Dr. High Point
Gee, Mrs. William N., Jr.
1001 S. Madison Goldsboro
Gentry, Mrs. George Wesley Box 146 Roxboro
Gentry, Mrs. William Harold
N. C. Sanatorium McCain
Georgiade, Mrs. Nicholas G.
2523 Wrightwood Ave. Durham
Germouth, Mrs. Frederick George
2100 Sherwood Ave. Charlotte
Gibbon, Mrs. James Wilson
720 Bromley Rd. Charlotte
Gibbons, Mrs. Julius Joyce, Jr.
215 Highland Ave. Lenoir
Gibbs, Mrs. Norfleet M.
209 Johnson St. New Bern
Gibbs, Mrs. Stuart Wynn
Armstrong Park Circle Gastonia
Gibson, Mrs. Milton Reynolds
105 Chamberlain St. Raleigh
Gibson, Mrs. Thomas G., Jr. Gibson
Gilbert, Mrs. George Gaylord
1 St. Dunstans Rd. Asheville
Gill, Mrs. Joseph Armstrong
893 River Rd. Elizabeth City
Gilliam, Mrs. James Sylvester, Jr.
607 W. Lexington Ave. High Point
Gilmore, Mrs. Clyde Manly
108 E. Avondale Greensboro
Gilmour, Mrs. Monroe Taylor
734 Granville Rd. Charlotte
Givens, Mrs. George H., Jr. Taylorsville
Glasgow, Mrs. Douglas McKay
2022 Glendale Rd. Charlotte
Glasson, Mrs. John, 615 Swift Ave. Durham
Glenn, Mrs. Channing, Box 335 Elizabethtown
Glenn, Mrs. Charles Foster
405 Ridgecrest Ave Rutherfordton
Glenn, Mrs. Henry Franklin, Jr.
319 S. Oakland Ave. Gastonia
Glenn, Mrs. John C., Jr.
200 Hempstead Pl. Charlotte
Glenn, Mrs. Richard Reece
2507 Miller Park Cl. Winston-Salem
Gobble, Mrs. Fleetus Lee, Jr.
925 S. Hawthorne Rd. Winston-Salem
Godwin, Mrs. Harold Lacy
1811 Lakeshore Dr. Fayetteville
Gold, Mrs. Ben Miller, Jr.
Country Club Dr. Rocky Mount
Goldner, Mrs. J. Leonard
602 E. Forest Hills Blvd. Durham
Goley, Mrs. Willard Coe, 217 N. Main St. Graham
Goode, Mrs. Thomas Vance, III
326 Summit Ave. Statesville
Gooding, Mrs. Guy U. Kenansville
Goodman, Mrs. Benjamin Warren
226 Fifth St., S. E. Hickory
Goodwin, Mrs. Cleon Walton
1107 W. Nash St. Wilson
Goodwin, Mrs. Oscar Sexton, Raleigh Rd. Apex
Googe, Mrs. James Turner
335 Grand Boulevard Boone
Gore, Mrs. John Pratt
957 Lambeth Circle Durham
Goswick, Mrs. Claude Benjamin
1747 Clairmont Drive Hendersonville
Goswick, Mrs. Harry Wilson, Jr.
280 Canterbury Trail Winston-Salem
Gradis, Mrs. Howard Henry
Forest Hill Drive Greenville
Grady, Mrs. Edward Stephen, Box 447 Smithfield
Grady, Mrs. Franklin McLean
Madam Moore's Lane New Bern

Grady, Mrs. Leland Vaine
1527 W. Nash St. ..... Wilson
Graham, Mrs. Charles Pattison
123 Forest Hills Dr. ..... Wilmington
Graham, Mrs. John Borden
Roosevelt Rd. ..... Chapel Hill
Graham, Mrs. Walter Raleigh
741 Hempstead Pl. ..... Charlotte
Graham, Mrs. William Alexander
2247 Cranford Rd. ..... Durham
Gray, Mrs. Cyrus Leighton
912 Rotary Dr. ..... High Point
Green, Mrs. Harold David
1172 Hawthorne Rd. ..... Winston-Salem
Green, Mrs. Philip Palmer
435 E. Indiana Ave. ..... Southern Pines
Greene, Mrs. Phares Yates
1004 E. Willowbrook Dr. ..... Burlington
Greene, Mrs. William Alexander
500 Pinkney St. ..... Whiteville
Greenwood, Mrs. James Brooks, Jr.
2319 Providence Rd. ..... Charlotte
Gregg, Mrs. Robert A.
3411 Cloverdale Dr. ..... Greensboro
Gregory, Mrs. John Eugene
521 Confederate Ave. ..... Salisbury
Gregory, Mrs. R. D., Jr.
105 Kimberly Knoll ..... Asheville
Gregory, Mrs. William Lyon
120 Easton Burton Hill ..... Lowell
Gridley, Mrs. Timothy H.
820 Carolina Ave. ..... Fayetteville
Grier, Mrs. Charles Talmadge, Box 475 ..... Carthage
Grier, Mrs. John Calvin, Jr.
Midland Road ..... Pinehurst
Griffin, Mrs. Harold Walker
537 N. Center St. ..... Hickory
Griffin, Mrs. Mark Alexander, Jr.
11 Forrest Rd. ..... Asheville
Griffin, Mrs. Robert Ashley
11 Hilltop Rd. ..... Asheville
Griffin, Mrs. Thomas Ray, Box 328 ..... Troutman
Griffin, Mrs. William Ray, Jr.
30 Hilltop Rd. ..... Asheville
Griffin, Mrs. William Ray, Sr.
8 Edwin Place ..... Asheville
Griffis, Mrs. John William, Box 191 ..... Denton
Griggs, Mrs. Boyce Powell
811 N. Oak St. ..... Lincolnton
Griggs, Mrs. Willard Wilson, Box 217 ..... Norwood
Grim, Mrs. Kenneth Boyd, 1421 Broad St. ..... Durham
Grimmett, Mrs. Matthew Hill
107 Country Club Dr. ..... Concord
Groome, Mrs. James Gordon
203 Edgedale Dr. ..... High Point
Gross, Mrs. Francis Warren
408 W. Lexington Ave. ..... High Point
Grove, Mrs. Raymond Fisk
1400 Live Oak Pkwy. ..... Wilmington
Groves, Mrs. Robert Burwell, Sr. ..... Lowell
Groves, Mrs. Robert Burwell, Jr.
2565 Pinewood Drive ..... Gastonia
Gulley, Mrs. Marcus Marcellus
Faculty Apartments ..... Winston-Salem
Gunn, Mrs. Charles Groshon
972 Kenleigh Circle ..... Winston-Salem
Gunter, Mrs. June U.
1411 N. Mangum St. ..... Durham
Gwynn, Mrs. Houston Lafayette, Box 6, Yanceyville

Haar, Mrs. Frederick Behrend
608 E. 9th St. ..... Greenville
Hackney, Mrs. Ben H. ..... Lucama
Hadley, Mrs. Herbert Wood
2607 S. Dickinson Ave. ..... Greenville
Hagaman, Mrs. John Bartlett, Jr.
304 North St. ..... Boone
Hagaman, Mrs. Len Doughton
101 Cherry Dr. ..... Boone
Haines, Mrs. Hilton Drummond
700 E. Washington St. ..... Rockingham
Haines, Mrs. Innes Correll
818 Anarine Rd. ..... Fayetteville
Hairfield, Mrs. Beverly Dew
415 W. Union St. ..... Morganton
Hairfield, Mrs. Theodore Vincent
404 Westview St. ..... Lenoir
Hall, Mrs. James Brownlee ..... Matthews
Hall, Mrs. John Moir, W. Main St. ..... Elkin
Hall, Mrs. Joseph Cullen
839 Fairmont Ave. ..... Salisbury
Hall, Mrs. William Bruce, Jr.
543 Vista Dr. ..... Fayetteville
Hall, Mrs. William Dewey
510 Washington St. ..... Roanoke Rapids
Hall, Mrs. William Hugh
3635 Barclay Downs Dr. ..... Charlotte
Ham, Mrs. Clem, West Blvd. ..... Laurinburg
Ham, Mrs. George Calverno
519 Dogwood Dr. ..... Chapel Hill
Hambrick, Mrs. Robert Theodore
529 Sixth St., N. W. ..... Hickory
Hambright, Mrs. Rufus Roberts
1809 Elkhart Dr. ..... Greensboro
Hamer, Mrs. Alfred Wilson
112 Pearson Dr. ..... Morganton
Hamer, Mrs. Douglas, Jr.
205 Norwood St. ..... Lenoir
Hamer, Mrs. Eugene Floyd, P. O. Box 476 ..... Monroe
Hamilton, Mrs. Alfred Thomason
1422 Canterbury Rd. ..... Raleigh
Hamilton, Mrs. Frank Hutchinson, Jr.
2815 Marlowe Dr. ..... Charlotte
Hamilton, Mrs. John Homer
2124 Cowper Dr. ..... Raleigh
Hamilton, Mrs. Joseph Franklin, Jr.
Albemarle Circle ..... Asheville
Hammond, Mrs. Alfred Franklin, Jr.
1514 Neuse Blvd. ..... New Bern
Hamrick, Mrs. John Carl, 1002 Kings Rd. ..... Shelby
Hamrick, Mrs. Ladd Watts, Jr.
103 Country Club Dr. ..... Concord
Hamrick, Mrs. Robert Arnold
927 Hill St. ..... Rocky Mount
Hand, Mrs. Edgar Hall ..... Pineville
Hand, Mrs. LeRoy Corbett, Jr. ..... Gatesville
Hanes, Mrs. Gideon Isaac, Jr.
836 Wellington Road ..... Winston-Salem
Happer, Mrs. William
205 Woodsway Lane ..... Lenoir
Harbison, Mrs. John William
911 N. Washington St. ..... Shelby
Hardaway, Mrs. John Stegar
434 Oakwood Dr. ..... Statesville
Hardin, Mrs. Eugene Ramsey
1103 N. Elm St. ..... Lumberton
Hardin, Mrs. Richard Henry
S. Granville St. ..... Edenton
Hardin, Mrs. Ronda Horton
Wilkesboro Rd. ..... Boone
Hardison, Mrs. Lewis Benjamin
113 Star Hill Rd. ..... Fayetteville
Hardman, Mrs. Edward Francis
Route 2, Huntington Park ..... Charlotte
Hare, Mrs. Roy Allen, 1023 Sycamore St. ..... Durham
Harer, Mrs. Adolph Eugene
1609 Canterbury Rd. ..... Raleigh
Hargrove, Mrs. Eugene Alexander
713 Greenwood Rd. ..... Chapel Hill
Harloe, Mrs. John Pinckney
669 Hempstead Pl. ..... Charlotte
Harmon, Mrs. Raymond Harris
Highland Dr. ..... Boone

Harper, Mrs. Matt C., Jr.
Caswell Training School ..... Kinston
Harper, Mrs. Robert N.
3322 Ocatea Drive ..... Raleigh
Harrell, Mrs. William Fletcher, Jr.
Brother's Dr. ..... Elizabeth City
Harrill, Mrs. Henry Clay
100 Elmwood Terrace ..... Greensboro
Harrill, Mrs. James Albert
2860 Reynolds Rd. ..... Winston-Salem
Harrington, Mrs. Lee I., Jr.
2423 Fairway Dr. ..... Winston-Salem
Harris, Mrs. Carlton McKenzie
204 Meadowbrook Terr. ..... Greensboro
Harris, Mrs. Charles Isaac, Jr.
500 School Drive ..... Williamston
Harris, Mrs. Charles Theodore, Jr.
425 Roberts Rd. ..... Salisbury
Harris, Mrs. Isaac Emerson, Jr.
3900 Dover Rd., Hope Valley ..... Durham
Harris, Mrs. Julian L.
1660 Mansfield Rd. ..... Winston-Salem
Harris, Mrs. Loftin Howell
417 East St. ..... Albemarle
Harris, Mrs. Tyndall Peacock
410 Westwood Dr. ..... Chapel Hill
Harry, Mrs. John McKamie
832 W. Rowan St. ..... Fayetteville
Hart, Mrs. Julian Deryl
Duke University Rd. ..... Durham
Hart, Mrs. Lillard Franklin, 236 E. Olive ..... Apex
Hart, Mrs. Oliver James
1930 Georgia Ave. ..... Winston-Salem
Hart, Mrs. Verling Kersey
106 W. 7th St. ..... Charlotte
Hartman, Mrs. Bernhard Henry
12 Cambridge Rd. ..... Asheville
Hartness, Mrs. William Rufus, Jr.
615 Carr St. ..... Sanford
Hatcher, Mrs. Samuel W. ..... Morehead City
Hawes, Mrs. Cecil Jennings
2101 Wendover Rd. ..... Charlotte
Hawes, Mrs. George Aubrey
1862 Queens Rd. W. ..... Charlotte
Hawkins, Mrs. Barry Fugh
330 Sunset Dr. ..... Concord
Hawkins, Mrs. Hal Burgess ..... Moravian Falls
Hawkins, Mrs. James Hubert ..... Alamance
Hayes, Mrs. James Willard
Lake View Rd. ..... Fairmont
Hayes, Mrs. William Clayton
Woodland Blvd. ..... Wilkesboro
Hayman, Mrs. Louis DeMaro, Jr.
203 W. Bayshore Blvd. ..... Jacksonville
Haywood, Mrs. Hubert Benbury, Jr.
2718 Gloucester Rd. ..... Raleigh
Heafner, Mrs. Bob O. ..... Stony Point
Hedgepeth, Mrs. Emmett Martin
Crestwood Dr. ..... Roxboro
Hedgpeth, Mrs. Edward McGowan
Rt. 3, Box 87 ..... Chapel Hill
Hedgpeth, Mrs. Louten Rhodes
1917 N. Walnut St. ..... Lumberton
Hedgpeth, Mrs. William Carey
2405 Kenan St. ..... Lumberton
Hedrick, Mrs. Clyde Reitzel
318 E. College Ave. ..... Lenoir
Hedrick, Mrs. Richard Eli
1999 Georgia Ave. ..... Winston-Salem
Hege, Mrs. John Roy, Martin Drive ..... Concord
Heinitsh, Mrs. George W.
Knollwood ..... Southern Pines
Helms, Mrs. Jefferson Bivins
319 W. Union St. ..... Morganton
Helsabeck, Mrs. Belmont Augustus
2315 Country Club Rd. ..... Winston-Salem
Helsabeck, Mrs. Chester Joseph
Box 236 ..... Walnut Cove
Hemmings, Mrs. Hugh Carroll
Lurawood Dr. ..... Morganton
Hemphill, Mrs. Clyde Hoke
P. O. Box 1084 ..... Black Mountain
Hemphill, Mrs. James Eugene
2002 Pinewood Circle ..... Charlotte
Henderson, Mrs. John Percy, Sr.
417 College St. ..... Jacksonville
Henderson, Mrs. John Percy, Jr.
107 Warlick St. ..... Jacksonville
Hendrick, Mrs. Harry Vance
404 S. Ridgecrest Ave. ..... Rutherfordton
Hendricks, Mrs. Paul Eugene
808 W. Mountain St. ..... Kings Mountain
Hendrix, Mrs. James Paisley
144 Pinecrest Rd. ..... Durham
Henry, Mrs. Hector H.
3535 Providence Rd. ..... Charlotte
Henry, Mrs. Russell Cole, 1545 Kings Road, Shelby
Henschen, Mrs. Hal
1309 General Lee Ave. ..... Fayetteville
Henson, Mrs. Thomas Albert
1105 Country Club Dr. ..... Greensboro
Herrin, Mrs. Keith Hermon
1204 Fairfield Dr. ..... Gastonia
Herrin, Mrs. William Benjamin
Carolyn Drive ..... Albemarle
Herring Mrs. Theodore Tilghman
Ripley Road ..... Wilson
Hester, Mrs. Joseph Robert
1 Buffalo St. ..... Wendell
Hester, Mrs. William Shepherd
802 Main St. ..... Reidsville
Hewitt, Mrs. Willard Chappel
W. Front St. Ext. ..... Burlington
Hiatt, Mrs. Joseph Spurgeon, Jr.
Box 85 ..... Southern Pines
Hicks, Mrs. Vonnie Monroe, Jr.
1515 Scales St. ..... Raleigh
Higgins, Mrs. Robert Donald
1204 Cowper Dr. ..... Raleigh
High, Mrs. Larry Allson ..... Nashville
Highsmith, Mrs. Charles, Jr. ..... Troy
Highsmith, Mrs. William Cochran
220 Bradford Ave. ..... Fayetteville
Hightower, Mrs. Felda
2455 Reynolds Drive ..... Winston-Salem
Hilderman, Mrs. Walter Carrington, Jr.
1724 Brandon Rd. ..... Charlotte
Hill, Mrs. Millard D. Hill
818 Daniels St. ..... Raleigh
Hill, Mrs. William Henry
115 E. South St. ..... Albemarle
Hipp, Mrs. Edward Reginald, Sr.
348 Hempstead Pl. ..... Charlotte
Hitch, Mrs. Joseph Martin, 918 Cowper Dr. Raleigh
Hobart, Mrs. Seth Guilford, Jr.
2011 W. Club Blvd. ..... Durham
Hodges, Mrs. Horace Hayden
423 Ferncliff Rd. ..... Charlotte
Hoggard, Mrs. William Alden, Jr.
2501 Rochelle ..... Elizabeth City
Hogshead, Mrs. Ralph, Jr., W. Park Dr., Morganton
Hoke, Mrs. Harold Reid
1605 Oaklawn Dr. ..... Greenville
Holbrook, Mrs. Joseph Samuel
223 N. Oak St. ..... Statesville
Holbrook, Mrs. William Douglas
2518 Danbury St. ..... Charlotte
Hollandsworth, Mrs. Luther Clarence
305 E. 18th St. ..... Lumberton
Hollister, Mrs. William Fredwin
Midland Rd. ..... Southern Pines
Hollowell, Mrs. Victor Boyce
515 Fenton Pl. ..... Charlotte

Hollyday, Mrs. William Murray
51 Lawrence Pl. ..... Asheville
Holmes, Mrs. George Washington
524 Roslyn Rd. ..... Winston-Salem
Holt, Mrs. Lawrence Byerly
2812 Reynolds Dr. ..... Winston-Salem
Hood, Mrs. Christopher Kennedy
5143 Beckford Dr. ..... Charlotte
Hood, Mrs. Richard Thornton, Jr.
1109 Carey Rd. ..... Kinston
Hooks, Mrs. Richard Eugene ..... St. Pauls
Hooper, Mrs. Joseph Ward, Jr.
2600 Parmelee Dr. ..... Wilmington
Hooper, Mrs. Joseph Ward, Sr.
1817 Market St. ..... Wilmington
Hoot, Mrs. Melvin Phillip
1505 E. 5th St. ..... Greenville
Horner, Mrs. Jack Chenoweth ..... Spruce Pine
Hornowski, Mrs. Marcel Jerome
317 Charlotte St. ..... Asheville
Horsley, Mrs. Thomas Martin ..... Elizabeth City
Horsley, Mrs. William Nolen
South Point Rd. ..... Belmont
Hoskins, Mrs. John Robinson, III
36 Evelyn Pl. ..... Asheville
Hoskins, Mrs. William Hume
Fuller St. ..... Whiteville
Hough, Mrs. Mac Johnson
3234 Park Rd. ..... Charlotte
Houghton, Mrs. Raymond C.
1800 River Dr. ..... New Bern
Houser, Mrs. Forest Melville, Elm St., Cherryville
Hovis, Mrs. Leighton Watson
810 Berkeley Ave. ..... Charlotte
Howard, Mrs. Corbett Etheridge
618 E. Park Ave. ..... Goldsboro
Howard, Mrs. Joseph Cooper, Jr.
Lafayette St. ..... Clinton
Howard, Mrs. Paul Osman
Carbonton Hgts. ..... Sanford
Howell, Mrs. Charles Maitland, Jr.
515 Lester Lane ..... Winston-Salem
Howell, Mrs. Julius Ammons
2662 Robin Hood Rd. ..... Winston-Salem
Howell, Mrs. William Lawrence ..... Ellerbe
Howerton, Mrs. James R. ..... Columbia
Hubbard, Mrs. Frederick Cecil, Sr. ..... Wilkesboro
Hubbard, Mrs. Robert Thomas
126 Lakeshore Dr. ..... Asheville
Huckeriede, Mrs. Mark Henry
Anson Ave. ..... Laurinburg
Hudson, Mrs. Miles Hildebrand
240 Bouchard St. ..... Valdese
Huey, Mrs. Thomas Walker, Jr.
2438 Sharon Rd. ..... Charlotte
Huffines, Mrs. Thomas Ruffin
16 Hilltop Rd. ..... Asheville
Huffman, Mrs. Stanton Vance
Route 2 ..... Elon College
Hughes, Mrs. Carlisle Bee, Jr.
Box 326 ..... Yadkinville
Hughes, Mrs. Jack
Route 2, Box 336 ..... Durham
Humphries, Mrs. Charles Oliver
Summerset Road ..... Durham
Huneycutt, Mrs. Joel Broadus
627 Yadkin St. ..... Albemarle
Hunt, Mrs. Jasper Stewart
2064 Queens Rd., E. ..... Charlotte
Hunt, Mrs. Walter Skellie, Jr.
1606 Canterbury Rd. ..... Raleigh
Hunt, Mrs. William Jack
720 Ferndale Dr. ..... High Point
Hunter, Mrs. John Pullen
325 S. Academy St. ..... Cary
Hunter, Mrs. W. Myers
800 E. Blvd. ..... Charlotte
Hunter, Mrs. William Blair
1007 10th St. ..... Lillington
Hunter, Mrs. William Cooper
1106 W. Nash St. ..... Wilson
Hurdle, Mrs. Samuel Walker
2571 Country Club Rd. ..... Winston-Salem
Hurdle, Mrs. Thomas Gray
212 Fuller St. ..... Fayetteville
Hutchinson, Mrs. Sankey Smith ..... Bladenboro
Hyde, Mrs. Austin Tabor, Jr.
Union Road ..... Rutherfordton

Inman, Mrs. Charles Ernest
Fisher Park ..... Fairmont
Irving, Mrs. Richard Carroll
601 4th Ave. W. ..... Hendersonville
Irwin, Mrs. Henderson ..... Eureka
Isenhower, Mrs. Joseph Andrew
232 Fifth St., S. E. ..... Hickory
Izlar, Mrs. Henry LeRoy, Jr.
2202 Sprunt St. ..... Durham

Jackson, Mrs. Marshall Vaden, Box 87, Princeton
Jackson, Mrs. Richard DeWitt
909 S. Rockford St. ..... Mt. Airy
Jackson, Mrs. Robert Toombus
3347 Alamance Dr. ..... Raleigh
Jackson, Mrs. Roger A.
111-A Dobbin Ave. ..... Fayetteville
Jacobs, Mrs. Julian Erich John
2000 Providence Rd. ..... Charlotte
James, Mrs. Arthur Augustus, Jr.
614 Spring Lane ..... Sanford
James, Mrs. George W.
1020 Wellington Rd. ..... Winston-Salem
James, Mrs. Richard Thomas, Jr.
2300 Wendover Rd. ..... Charlotte
James, Mrs. William Daniel, Vance St. ..... Hamlet
James, Mrs. William Duer, Jr.
306 Entwistle St. ..... Hamlet
Jarman, Mrs. Fontaine Graham, Sr.
402 Hamilton St. ..... Roanoke Rapids
Jarman, Mrs. Fontaine Graham, Jr.
429 Sunset Ave. ..... Roanoke Rapids
Jarrel, Mrs. Wilburn Eric
329 Country Club Rd. ..... Mt. Airy
Jarvis, Mrs. James Luther
1003 Woodland Drive ..... Gastonia
Jenkins, Mrs. Albert Milton
823 Bryan St. ..... Raleigh
Jennings, Mrs. Royal Green
724 Florham Ave. ..... High Point
Jensen, Mrs. Milton Baker
152 Milford Dr. ..... Salisbury
Jervey, Mrs. William St. Julien
907 Elizabeth Rd. ..... Shelby
Johnson, Mrs. Amos Neill ..... Garland
Johnson, Mrs. Charles Thomas, Jr. ..... Red Springs
Johnson, Mrs. Charles Thomas, Sr. ..... Red Springs
Johnson, Mrs. Floyd, 201 Pinkney St. ..... Whiteville
Johnson, Mrs. Gale Denning
400 W. Broad St. ..... Dunn
Johnson, Mrs. Gaston Frank
3225 Nottingham Rd. ..... Winston-Salem
Johnson, Mrs. George, Jr., 1312 Watts St., Durham
Johnson, Mrs. Harry Lester, Box 530 ..... Elkin
Johnson, Mrs. Heber Wellington
3002 Wayne Dr. ..... Wilmington
Johnson, Mrs. James Trimble
312 E. 16th ..... Lumberton
Johnson, Mrs. John Ralph, N. Orange St. ..... Dunn
Johnson, Mrs. Joseph A.
Winslow Acres ..... Elizabeth City
Johnson, Mrs. Joseph Lewis
205 N. Main St. ..... Graham
Johnson, Mrs. Paul William
Route 8, Green Meadows ..... Winston-Salem
Johnson, Mrs. Philip Martyn
220 Hayes St. ..... Chapel Hill

Johnson, Mrs. Robert Charles
701 Locust St. ..... High Point
Johnson, Mrs. Walter Royle
3 Fairway Place ..... Asheville
Johnson, Mrs. Wingate Memory
428 Stratford Rd. ..... Winston-Salem
Johnston, Mrs. Frank Randolph
735 Arbor Rd. ..... Winston-Salem
Johnston, Mrs. Harvey Wylie
1915 Club Rd. ..... Charlotte
Johnston, Mrs. James William
508 Wildwood Lane ..... Burlington
Johnston, Mrs. Robert Lee
218 N. Patrick St. ..... Leaksville
Johnston, Mrs. William Oliver
2611 Forest Dr. ..... Charlotte
Jones, Mrs. Beverly Nicholas, Jr.
633 Barnesdale Rd. ..... Winston-Salem
Jones, Mrs. Beverly Nicholas, Sr.
455 Carolina Cl. ..... Winston-Salem
Jones, Mrs. Carey C., S. Salem St. ..... Apex
Jones, Mrs. Claude M., 509 E. 4th St., Greeenville
Jones, Mrs. Clayton Joe, 873 Arbor Lane, Concord
Jones, Mrs. Craig Strickie
Westfield Road ..... Shelby
Jones, Mrs. Dean Cicero ..... Jefferson
Jones, Mrs. Donnie Hue, Jr., Box 67 ..... Princeton
Jones, Mrs. Edward L.
400 Randolph St. ..... Thomasville
Jones, Mrs. Frank Woodson
Westlake Hills ..... Newton
Jones, Mrs. Joseph Kempton
109 E. Boundary St. ..... Chapel Hill
Jones, Mrs. Joseph Reid, Jr., Box 298 ..... King
Jones, Mrs. Martin Evans ..... Granite Falls
Jones, Mrs. Otis Hunter
1710 Queens Rd. W. ..... Charlotte
Jones, Mrs. Paul Erastus
Rt. 3, Box 452A ..... Concord
Jones, Mrs. Robert Spurgeon
405 Beaumond ..... Shelby
Jones, Mrs. Thomas Thweatt
2621 Stuart Dr. ..... Durham
Jones, Mrs. William Robert
217 Clifton Rd. ..... Rocky Mount
Jordan, Mrs. John Alfred, Jr.
236 Pinecrest Dr. ..... Fayetteville
Jordan, Mrs. Riley Moore
310 Fulton St. Ext. ..... Raeford
Jordan, Mrs. Weldon Huske
601 Westmont Dr. ..... Fayetteville
Joyce, Mrs. Charles Weldon
617 Decatur ..... Madison
Joyner, Mrs. William Stafford
401 Whitehead Circle ..... Chapel Hill
Judd, Mrs. Glenn Ballentine ..... Varina
Justa, Mrs. Samuel Harry
505 Piedmont Ave. ..... Rocky Mount
Justice, Mrs. William Shipp
14 White Oak Rd. ..... Asheville
Justis, Mrs. Homer Rodeheaver
820 Fairbanks Rd. ..... Charlotte

Kalevas, Mrs. Harry John
5415 Wedgewood Dr. ..... Charlotte
Katz, Mrs. Joseph, Kinston Apts. ..... Kinston
Kearse, Mrs. William Oliver ..... Canton
Keathley, Mrs. Franklin Burr
206 Grove Ave. ..... Lenoir
Keever, Mrs. James Woodfin
623 Second Ave., N. W. ..... Hickory
Keiter, Mrs. William Eugene
1507 Perry Park Dr. ..... Kinston
Keith, Mrs. Julian Faison, Jr., Box 635, Clarkton
Keith, Mrs. Marion Yates
1603 Carlisle Rd. ..... Greensboro
Keleher, Mrs. Michael Francis
18 Maywood Rd. ..... Asheville
Kelemen, Mrs. William Arthur
1206 Kennilworth Ave ..... Charlotte
Keller, Mrs. Guy Otis
1223 Providence ..... Charlotte
Kelley, Mrs. Thomas Francis
805 Montgomery Ave. ..... Albemarle
Kelly, Mrs. Luther Wrentmore, Jr.
3915 Shelton Place ..... Charlotte
Kelly, Mrs. Luther Wrentmore, Sr.
1014 Kenilworth Ave. ..... Charlotte
Kelly, Mrs. Richard Alexander
308 N. Chapman ..... Greensboro
Kemp, Mrs. Malcolm Drake
210 Highland Rd. ..... Southern Pines
Kenan, Mrs. LeRoy Fulton
22 Henderson St. ..... Badin
Kendall, Mrs. Benjamin Horton
116 Belvedere Ave. ..... Shelby
Kendall, Mrs. John Harold
800 Stewart Ave. ..... Clinton
Kendrick, Mrs. Charles Mattox
103 Poplar St. ..... Lenoir
Kendrick, Mrs. Richard L.
2500 Roswell Ave. ..... Charlotte
Kennard, Mrs. John William
Maple St. ..... Blowing Rock
Kennedy, Mrs. John Pressly
2026 Providence Rd. ..... Charlotte
Kennedy, Mrs. Leon Toland
1907 Sterling Rd. ..... Charlotte
Kennel, Mrs. Arthur J. ..... Jefferson
Kent, Mrs. Alfred A., Jr. ..... Granite Falls
Kermon, Mrs. Louis Todd
1625 Canterbury Rd. ..... Raleigh
Kern, Mrs. John Campbell, Box 6 ..... Booneville
Kernodle, Mrs. Charles Edward, Jr.
444 Tarleton Ave. ..... Burlington
Kernodle, Mrs. Donald Reid
1-D Brookwood Garden Apts. ..... Burlington
Kernodle, Mrs. Dwight Talmadge
Route 2 ..... Elon College
Kernodle, Mrs. Harold Barker
423 Glenwood Ave. ..... Burlington
Kernodle, Mrs. John Robert
Edgewood Ave. Ext. ..... Burlington
Kerns, Mrs. Thomas Cleveland, Sr.
120 Briar Cliff Rd. ..... Durham
Kerns, Mrs. Thomas Cleveland, Jr.
1118 Wells St. ..... Durham
Kerr, Mrs. George Russell
Woodland Ave. Ext. ..... Burlington
Kerr, Mrs. John Guthrie ..... Leicester
Kerr, Mrs. Joseph T.
1423 Kenan Ave. ..... Wilson
Kesler, Mrs. Robert Cicero
705 Twyckenham Dr. ..... Greensboro
Kester, Mrs. John Marcas, Jr.
2935 Avondale Ave. ..... Charlotte
Ketner, Mrs. Fred Yadkin
185 Washington Lane ..... Concord
Keys, Mrs. Carson Meade ..... West Jefferson
Kibler, Mrs. William Herbert
100 Valdese Ave. ..... Morganton
Kidd, Mrs. Ralph Vincent, Jr.
1227 Canterbury Rd. ..... Charlotte
King, Mrs. Daniel, 611 Maple Ave. ..... Reidsville
King, Mrs. Edward Sandling, Wesson Road, Shelby
King, Mrs. Francis Parker
1603 Lucerne Way ..... New Bern
King, Mrs. Parks McCombs
1419 Wendover Lane ..... Charlotte
King, Mrs. Robert Wilson
113 Dobbin Ave. ..... Fayetteville
King, Mrs. Walter Gorringe
1305 Latham Rd. ..... Greensboro
Kinlaw, Mrs. Murray Carlyle
202 W. 21st St. ..... Lumberton

Kirby, Mrs. William Leslie
734 Arbor Rd. ..... Winston-Salem
Kirkland, Mrs. John Alvin, 715 Trinity Dr., Wilson
Kirksey, Mrs. James Jackson
Riverside Dr. ..... Morganton
Kirksey, Mrs. William Albert
302 S. King St. ..... Morganton
Kistler, Mrs. Clark Clemmons
2212 St. Mary's St. ..... Raleigh
Kitchin, Mrs. Thurman Delna
413 N. Main St. ..... Wake Forest
Kitchin, Mrs. William Walton
Coharie Dr. ..... Clinton
Klenner, Mrs. Fred Robert ..... Reidsville
1205 Forest Road ..... Reidsville
Klostermyer, Mrs. Louis Leon
419 Vanderbilt Rd. ..... Asheville
Kneedler, Mrs. William Harding, Box 397, Davidson
Knight, Mrs. Floyd Lafayette, Route 4, Sanford
Knoefel, Mrs. Arthur Eugene, Jr.
104 Laurel Circle ..... Black Mountain
Knox, Mrs. Joseph Clyde
1228 S. Live Oak Parkway ..... Wilmington
Kodack, Mrs. Albert
9 N. Kensington Rd. ..... Asheville
Koon, Mrs. Ethen Sease, Jr.
159 Kimberly Ave. ..... Asheville
Koonce, Mrs. Donald Brock
1407 Oleander Dr. ..... Wilmington
Kornegay, Mrs. Robert Dumais
1418 Lafayette Ave. ..... Rocky Mount
Koseruba, Mrs. George Michael
18 E. Fayetteville ..... Wrightsville Beach
Kramer, Mrs. Morris
503 Walnut St. ..... Lumberton
Kroh, Mrs. Laird Franklin
2201 McClintock Rd. ..... Charlotte
Kroncke, Mrs. Fred George
623 Cedar St. ..... Roanoke Rapids
Kurtz, Mrs. Elam ..... Jefferson
Kutscher, Mrs. George William
29 Elk Mountain Scenic Hwy. ..... Asheville
Kutteh, Mrs. Hanna Constantine
567 Lakeside Dr. ..... Statesville
Kyles, Mrs. Norman Bruce
State Hospital ..... Goldsboro
Lackey, Mrs. Robert Stevenson
3931 Shelton Pl. ..... Charlotte

Lackey, Mrs. Walter Jackson ..... Fallston
Lacy, Mrs. Thomas Allen
608 S. Fulton St. ..... Salisbury
Lafferty, Mrs. John Ogden
2059 Briarwood Road ..... Charlotte
Lafferty, Mrs. John William
1055 Fourth Ave., N.W. ..... Hickory
Lahser, Mrs. Charles Irvin
1212 Crescent Ave. ..... Gastonia
Lake, Mrs. Ralph Callihan
4500 Starmount Dr. ..... Greensboro
Lambeth, Mrs. William Arnold, Jr.
Route 8 ..... Winston-Salem
Lampley, Mrs. Charles Gordon, Fairway Dr., Shelby
Lampley, Mrs. William Askew
116 Briarwood Lane ..... Hendersonville
Landon, Mrs. Henry C., III
611 Eighth St. ..... North Wilkesboro
Lane, Mrs. Edgar Winslow, Jr.
Bouchard St. ..... Valdese
Lang, Mrs. Andrew Martin
106 N. Anderson St. ..... Morganton
Langdell, Mrs. Robert Dana
11 William Circle ..... Chapel Hill
Langdon, Mrs. Benjamin Bruce
Route 3, Box 40 ..... Fayetteville
Lapsley, Mrs. Alberti Fraser, 4 Tallassee St., Badin
Large, Mrs. Hiram Lee, Jr.
Route 1, Box 358-B ..... Matthews
Larkin, Mrs. Ernest Wadill, Jr.
1202 Respass St. ..... Washington
Lassiter, Mrs. James Alexander
Country Club Rd. ..... Weldon
Lassiter, Mrs. Tallie E. ..... Biscoe
Lassiter, Mrs. Will Hardee, Jr.
709 Sunset Dr. ..... Smithfield
Latham, Mrs. Joseph Roscoe
1301 National Ave. ..... New Bern
Laton, Mrs. James Franklin
116 E. North St. ..... Albemarle
La Tourette, Mrs. Kenneth Abran, Hendersonville
Lawing, Mrs. Karl Lander
327 N. Laurel St. ..... Lincolnton
Lawrence, Mrs. Benjamin Jones
Ashton Hall ..... Pace, Virginia
Lawrence, Mrs. Benjamin Jones, Jr.
S. 915 Rockford St. ..... Mt. Airy
Lawrence, Mrs. John Charles
1200 N. Elm ..... Lumberton
Lea, Mrs. James Walter, Jr.
721 W. Davis St. ..... Burlington
Leath, Mrs. MacLean Bacon ..... Archdale
LeBauer, Mrs. Maurice Leon
2223 St. Andrews Rd. ..... Greensboro
LeBauer, Mrs. Sidney Ferring
910 Cornwallis Dr. ..... Greensboro
Ledbetter, Mrs. James McQueen
701 E. Washington St. ..... Rockingham
Lee, Mrs. Allen Henry, 309 N. Massey ..... Selma
Lee, Mrs. Ferdinand Wayne
442 Hempstead ..... Charlotte
Lee, Mrs. Francis Brown, Pageland Rd. ..... Monroe
Lee, Mrs. Thomas Leslie, Rountree St. ..... Kinston
LeGrand, Mrs. Robert Hampton
2014 Pembroke Rd. ..... Greensboro
Leinbach, Mrs. Lawrence Brickenstein
260 Kenleigh Circle ..... Winston-Salem
Lennon, Mrs. Hershel Clanton
911 Sunset Dr. ..... Greensboro
Lentz, Mrs. Clarence Manteo
317 N. Fifth St. ..... Albemarle
Leonard, Mrs. Jacob Calvin, Jr.
Box 566 ..... Lexington
Leonard, Mrs. Walter Evan
104 27th St., N.W. ..... Hickory
Levi, Mrs. George Albert
605 Pearl St. ..... Fayetteville
Lewis, Mrs. Charles Pell, Jr.
813 S. Main ..... Reidsville
Lewis, Mrs. Clifford Whitfield
322 Woodrow ..... High Point
Lewis, Mrs. John Sumter
362 N. Center St. ..... Hickory
Lewis, Mrs. Martin Thomas ..... Beaufort
Lewis, Mrs. Robert Edward
Finley Park ..... North Wilkesboro
Lide, Mrs. Thomas Norwood
601 Barnsdale Rd. ..... Winston-Salem
Ligon, Mrs. Harold Belton
43 Beverly Apt. ..... Asheville
Liles, Mrs. George Welch, 257 Louise Ave., Concord
Liles, Mrs. Lonnie Carl
3025 Randolph Dr. ..... Raleigh
Lilly, Mrs. James M.
226 Bradford Rd. ..... Fayetteville
Lilly, Mrs. William Harold, Benson Highway, Dunn
Lindsay, Mrs. Robert Boyd
730 Gimghoul Rd. ..... Chapel Hill
Lindsey, Mrs. Mark McDonald
415 Minturn Ave. ..... Hamlet
Link, Mrs. Melvin Robert
1050 Ardsley Rd. ..... Charlotte
Little, Mrs. Howard Q. L., Box 205 ..... Gibsonville
Little, Mrs. Joseph Rice, Oak Rd. ..... Salisbury
Littlejohn, Mrs. James Talmadge
8 Cedarcliff Rd. ..... Asheville

Littlejohn, Mrs. Thomas Willard
2402 Forest Dr. ..... Winston-Salem
Littleton, Mrs. Leonidas Rosser, Jr. ..... Mt. Airy
Liverman, Mrs. Henry Joseph ..... Engelhard
Liverman, Mrs. Joseph Thomas ..... Nashville
Llewellyn, Mrs. Charles Elroy, Jr.
3525 Hamstead Court ..... Durham
Lock, Mrs. Frank Ray
1819 Buena Vista Rd. ..... Winston-Salem
Lockhart, Mrs. David Armistead
Rt. 3, Burrage Rd. ..... Concord
Lockhart, Mrs. Walter Samuel, Jr.
2408 Highland Ave. ..... Durham
Lodmell, Mrs. Elmer Arthur
1308 Cornwallis ..... Greensboro
Logan, Mrs. Frank William Hicks
1007 N. Washington ..... Rutherfordton
Lomax, Mrs. Donald Henry
1125 Emerald St. ..... Salisbury
London, Mrs. Arthur Hill, Jr.
Shepherd and Wells Sts. ..... Durham
Long, Mrs. Benjamin Leroy ..... Glen Alpine
Long, Mrs. David Thomas
405 S. Main St. ..... Roxboro
Long, Mrs. Glenn, 630 N. Main St. ..... Newton
Long, Mrs. Thomas Drumwright
513 S. Lamar St. ..... Roxboro
Long, Mrs. Thomas Walter, N. Main St., Newton
Long, Mrs. Vann McKee
1021 West End Blvd. ..... Winston-Salem
Long, Mrs. William Lunsford, Jr.
1103 Cowper Dr. ..... Raleigh
Long, Mrs. William Matthews ..... Mocksville
Long, Mrs. Zachary Filmore
214 Ann St. ..... Rockingham
Longino, Mrs. Frank Henry
1914 Forest Hill Dr. ..... Greenville
Lore, Mrs. Ralph Eli, 407 Pennton Ave. ..... Lenoir
Lott, Mrs. William Clifton
310 Vanderbilt Rd. ..... Asheville
Lounsbury, Mrs. James Breckinridge
2519 Guilford Ave. ..... Wilmington
Lovelace, Mrs. Thomas Claude ..... Henrietta
Lovell, Mrs. William Figgatt
1517 Biltmore Dr. ..... Charlotte
Lovill, Mrs. Robert Jones, Box 647 ..... Mt. Airy
Lowery, Mrs. Charles D. ..... Lowell
Lowery, Mrs. John Robert
1620 Wiltshire ..... Salisbury
Lownes, Mrs. Milton Markley, Jr.
Redwheel Farm ..... Dudley
Lubchenko, Mrs. Nicholas Eleazer ..... Harrisburg
Lucas, Mrs. Robert Theodore, Jr.
944 Henley Place ..... Charlotte
Lumb, Mrs. George Dennett
1325 Hawthorne Road ..... Wilmington
Lund, Mrs. Herbert Zachareus
3610 Kirby Dr. ..... Greensboro
Lunsford, Mrs. Lewis, Jr.
20 Hy-Vu Drive ..... Asheville
Lupton, Mrs. Carroll Crescent
3300 Starmount Dr. ..... Greensboro
Lupton, Mrs. Emmett Stevenson ..... Alamance
Lusk, Mrs. John A., III
1800 W. Market St. ..... Greensboro
Lusk, Mrs. Walter Coles, 946 Hill St., Greensboro
Lutterloh, Mrs. Isaac Hayden, Sr.
202 McIver St. ..... Sanford
Lutterloh, Mrs. Isaac Hayden, Jr.
510 Walnut Dr. ..... Sanford
Lutz, Mrs. James Dwight
1125 Highland Ave ..... Hendersonville
Lyday, Mrs. Charles Emmett
819 S. York St. ..... Gastonia
Lyday, Mrs. Russell Osborne
1610 Nottingham Rd. ..... Greensboro
Lymberis, Mrs. Marvin Nicholas
2111 Radcliffe Ave. ..... Charlotte
Lynch, Mrs. John Franklin, Jr.
905 Arbordale Dr. ..... High Point
Lynn, Mrs. Cy Kellie, Bouchard St. ..... Valdese
Lynn, Mrs. James Wiley, Jr.
Rockwood Acres ..... Burlington
Lynn, Mrs. William S., Bristol Road ..... Durham
Lyon, Mrs. Brockton Reynolds
Country Club Apts. ..... Greensboro

McAdams, Mrs. Charles Rupert, Sr.
31 W. Woodrow Ave. ..... Belmont
McAdams, Mrs. Charles Rupert, Jr.
Route 4, Sardis Rd. ..... Matthews
McAllister, Mrs. Hugh Alexander
Riverside Dr. ..... Lumberton
McArn, Mrs. Hugh Munroe,
701 Anson Ave. ..... Laurinburg
McBryde, Mrs. Angus Murdoch
411 E. Forest Hills Blvd. ..... Durham
McCain, Mrs. John Lewis, 1601 Highland, Wilson
McCall, Mrs. Michael Alvin ..... Marion
McCall, Mrs. William, Jr.
508 Walter Court ..... Winston-Salem
McCarthy, Mrs. John Joseph
N. C. Sanatorium ..... McCain
McCarty, Mrs. Ralph Leeves
843 Hempstead Pl. ..... Charlotte
McClees, Mrs. Edward Count ..... Elm City
McClelland, Mrs. Joseph O. ..... Maxton
McConnell, Mrs. Harvey Russell
1119 Cumberland Ave. ..... Gastonia
McCoy, Mrs. Joseph Bennett, Jr.
2026 Sharon Lane ..... Charlotte
McCracken, Mrs. Joseph Pickett
126 Pinecrest Rd. ..... Durham
McCracken, Mrs. Marvin Howell
28 Griffing Blvd. ..... Asheville
McCutchan, Mrs. Frank
Wilshire Dr., Milford Hills ..... Salisbury
McDonald, Mrs. Con T.
1106 S. Madison Ave. ..... Goldsboro
McDowell, Mrs. Harold Clyde
200 Arbor Rd. ..... Winston-Salem
McDowell, Mrs. Roy Hendrix
20 Myrtle St. ..... Belmont
McEachern, Mrs. Duncan Roland
1915 Hydrangea Pl. ..... Wilmington
McElrath, Mrs. Percy John
2736 Toxey Dr. ..... Raleigh
McElwee, Mrs. Ross S., Jr.
2817 Belvedere Ave. ..... Charlotte
McFadyen, Mrs. Oscar Lee, Jr.
524 Valley Rd. ..... Fayetteville
McGavran, Mrs. Edward G.
Greenwood Rd. ..... Chapel Hill
McGee, Mrs. Julian Murrill
811 N. Elm St. ..... Greensboro
McGill, Mrs. John Charles
506 Crescent Hill ..... Kings Mountain
McGill, Mrs. Kenneth Harwood
505 Crescent Hill ..... Kings Mountain
McGimsey, Mrs. James Franks, Jr.
Edgewood St. ..... Morganton
McGowan, Mrs. Claudius ..... Plymouth
McGowan, Mrs. Joseph Francis
303 Vanderbilt Rd. ..... Asheville
McGrath, Mrs. Frank Bernard
212 E. 17th St. ..... Lumberton
McGuffin, Mrs. William Christian
52 Forest Rd. ..... Asheville
McIntosh, Mrs. Henry Deane
2406 N. Duke St. ..... Durham
McKee, Mrs. John Sasser, Jr.
State Hospital ..... Morganton
McKee, Mrs. Lewis Middleton
3633 Hope Valley Rd. ..... Durham
McKenzie, Mrs. Edward Burt
329 Summit Ave. ..... Salisbury

McKenzie, Mrs. Wayland Nash
N. Tenth St. ..... Albemarle
McKinnon, Mrs. George Edward
1836 Harris Road ..... Charlotte
McKinnon, Mrs. William James
501 W. Wade St. ..... Wadesboro
McLain, Mrs. Bill Reid, Box 328 ..... Troutman
McLain, Mrs. John Edward G.
3916 Rugby Rd. ..... Durham
McLaurin, Mrs. Daniel Archie, Box 487 ..... Dobson
McLean, Mrs. Ewen Kenneth
1110 Queens Rd., W. ..... Charlotte
McLean, Mrs. James Wilton
217 DeVane St. ..... Fayetteville
McLendon, Mrs. Walter Jones, Box 116, Oakboro
McLeod, Mrs. John Calvin, Jr.
707 Pou St. ..... Goldsboro
McLeod, Mrs. John Purl Uttley ..... Marshville
McLeod, Mrs. William Leslie
1504 Biltmore Dr. ..... Charlotte
McLeod, Mrs. William Louis, S. Main St., Norwood
McManus, Mrs. Hugh Forrest, Jr.
3331 White Oak Rd. ..... Raleigh
McMillan, Mrs. James Fulford
907 Live Oak Pkwy. ..... Wilmington
McMillan, Mrs. Robert Lindsay
718 Arbor Rd. ..... Winston-Salem
McMillan, Mrs. Robert Monroe
Massachusetts Ave. Ext. ..... Southern Pines
McMillan, Mrs. Roscoe Drake
414 S. Main St. ..... Red Springs
McMillan, Mrs. Thomas Henry, Jr.
1412 Scott Court ..... Charlotte
McMurry, Mrs. Avery Willis
106 Hillside Dr. ..... Shelby
McNeill, Mrs. Claude Ackle, Jr.
121 Church St. ..... Elkin
McNeill, Mrs. James Hubert
Pilson St. ..... North Wilkesboro
McNiel, Mrs. Thomas Lee
N. Brook St. ..... Wilkesboro
McPheeters, Mrs. Samuel Brown
307 Linwood Ave. ..... Goldsboro
McPherson, Mrs. Charles Wade
422 Fountain Pl. ..... Burlington
McPherson, Mrs. Harry Thurman
3200 Oxford Dr. ..... Durham
McPherson, Mrs. Samuel Dace, Jr.
29 Oak Dr. ..... Durham
McRae, Mrs. James Thomas ..... Elkin
McRae, Mrs. Marvin Everett
121 Beverly Pl. ..... Greensboro
McRee, Mrs. Jean Douglas
808 Runnymeade Rd. ..... Raleigh
McWhorter, Mrs. Robert Ligon
905 Martin Dr. ..... Concord
Mabe, Mrs. Paul Alexander
122 Penrose Dr. ..... Reidsville
MacAlpine, Mrs. Orville Duncan, Route 2, Chandler
Macatee, Mrs. George, Jr.
25 Inglewood Rd. ..... Asheville
MacDonald, Mrs. J. Kingsley
3600 Barclay Downs Dr. ..... Charlotte
MacKay, Mrs. James Calvin
1805 Grace St. ..... Wilmington
Mackie, Mrs. George Carlyle, Box 927, Wake Forest
MacLauchlin, Mrs. William Thompson ..... Conover
Macon, Mrs. Gideon Hunt ..... Warrenton
MacRae, Mrs. John Donald
2813 Skye Dr. ..... Fayetteville
Maddrey, Mrs. Milner Crocker
610 Franklin St. ..... Roanoke Rapids
Maher, Mrs. James A.
Route 5, Box 249 ..... Goldsboro
Major, Mrs. Richard Smart
816 Fourth Ave., W. ..... Hendersonville
Maloney, Mrs. George R., Route 6 ..... Fayetteville
Maness, Mrs. Archibald Kelly
1918 Granville Rd. ..... Greensboro
Maness, Mrs. Paul Franklin
1010 Central Ave. ..... Burlington
Mangum, Mrs. Carlyle Thomas, Jr.
Highland Drive ..... Leaksville
Manly, Mrs. Isaac Vaughan
2215 Lakeview Dr. ..... Raleigh
Manly, Mrs. James Hollowell, Jr.
2100 St. James Rd. ..... Raleigh
Manning, Mrs. Isaac Hall, Jr.
3901 Hope Valley Rd. ..... Durham
Marder, Mrs. Gerard
Armstrong Park Rd. ..... Gastonia
Marks, Mrs. Edgar Seymour
1112 Hamel Rd. ..... Greensboro
Marr, Mrs. James Tilden
1718 Virginia Rd. ..... Winston-Salem
Marsh, Mrs. Frank Baker
725 Lake Drive ..... Salisbury
Marshall, Mrs. James Flournoy
341 Arbor Rd. ..... Winston-Salem
Marshburn, Mrs. Elisha Thomas, Jr.
218 Brightwood Rd. ..... Wilmington
Martin, Mrs. Benjamin Franklin
2560 Warwick Rd. ..... Winston-Salem
Martin, Mrs. Dan Anderson
Sourwood Drive ..... Chapel Hill
Martin, Mrs. James Alfred
1305 Walnut St. ..... Lumberton
Martin, Mrs. James Franklin
734 Roslyn Rd. ..... Winston-Salem
Martin, Mrs. Moir Saunders
314 Cherry St. ..... Mt. Airy
Martin, Mrs. Sidney Arnold
2711 Fairview Rd. ..... Raleigh
Martin, Mrs. William Francis
1534 Queens Rd., W. ..... Charlotte
Mason, Mrs. Lockert Bemiss
824 Country Club Rd. ..... Wilmington
Mason, Mrs. Manly ..... Newport
Mason, Mrs. Philip, 808 Henkel Rd. ..... Statesville
Massey, Mrs. Charles Caswell
1318 Carlton Ave. ..... Charlotte
Matheson, Mrs. Robert Arthur
Drawer 608 ..... Raeford
Matthews, Mrs. Hugh Archie ..... Canton
Matthews, Mrs. James H.
8 Mt. Vernon Circle ..... Asheville
Matthews, Mrs. Roland Dellwood
147 Tarleton Ave. ..... Burlington
Matthews, Mrs. Vann M.
3010 Central Ave. ..... Charlotte
Matthews, Mrs. William Camp
645 Hempstead Pl. ..... Charlotte
Matthews, Mrs. William Walter
Oakland Heights ..... Leaksville
Maulden, Mrs. Paul Ranzo
204 William St. ..... Kannapolis
Mauzy, Mrs. Charles Hampton, Jr.
1820 Greenbriar Rd. ..... Winston-Salem
Maxwell, Mrs. Clarence Schuyler ..... Beaufort
May, Mrs. Harvey Craig
1136 Berkeley Ave. ..... Charlotte
May, Mrs. William Joseph
1824 Georgia Ave. ..... Winston-Salem
Mayer, Mrs. Walter Brem
2828 St. Andrews Lane ..... Charlotte
Maynard, Mrs. Eugene Vincent
P. O. Box 155 ..... Elm City
Meadows, Mrs. Joseph Herman
108 Clyde Ave. ..... Wilson
Means, Mrs. Robert Lee
122 Revere Rd. ..... Winston-Salem
Mease, Mrs. Willis Eugene ..... Richlands
Mebane, Mrs. Giles Yancey, Carr Street ..... Mebane
Mebane, Mrs. John Gilmer
Tryon Rd. ..... Rutherfordton

Mebane, Mrs. William Carter, Jr.
4507 Wrightsville Ave. ..... Wilmington
Medlin, Mrs. Joseph Robert, Jr. ..... Rural Hall
Mees, Mrs. Theodore Howell
Maxton Rd. ..... Lumberton
Melero, Mrs. Andres Tarcisio
Newell Heights ..... Roxboro
Melton, Mrs. Robert Allen
Route 3, Box 192, Pirate's Cove Wilmington
Menefee, Mrs. Elijah Eugene, Jr.
2203 Cranford Rd. ..... Durham
Menzies, Mrs. Henry Harding
814 Oaklawn Ave. ..... Winston-Salem
Merritt, Mrs. Jesse Frederic
1615 S. College Park Dr. ..... Greensboro
Merritt, Mrs. John Hamlett
Barnette Ave. ..... Roxboro
Meschan, Mrs. Isadore
751 Roslyn Rd. ..... Winston-Salem
Metcalf, Mrs. Lawrence Edward
Chunns Cove Rd. ..... Asheville
Mewborn, Mrs. John Moses ..... Farmville
Miller, Mrs. Andrew C., III
110 W. Mauney Circle ..... Gastonia
Miller, Mrs. Cameron Eugene ..... Jefferson
Miller, Mrs. Emery Clyde, Jr.
438 Lynn Ave. ..... Winston-Salem
Miller, Mrs. George Rolfe
1040 Paramount Circle ..... Gastonia
Miller, Mrs. Harry, 108 Facility Dr., Fayetteville
Miller, Mrs. Henry Rankin
Fairway Drive ..... Black Mountain
Miller, Mrs. Ira Ben
1007 Westwood ..... High Point
Miller, Mrs. Joseph Teles
914 Springdale Lane ..... Gastonia
Miller, Mrs. Lloyd Davis ..... Marion
Miller, Mrs. Oscar Lee
314 Fenton Place ..... Charlotte
Miller, Mrs. Robert Carlysle
414 Harvie St. ..... Gastonia
Miller, Mrs. Robert Evans
1101 Bolling Rd. ..... Charlotte
Miller, Mrs. Walton Hoy, Jr.
1606 E. Mulberry St. ..... Goldsboro
Miller, Mrs. Warren Edwin
502 Pinkney St. ..... Whiteville
Milliken, Mrs. James Shepard
Box 55 ..... Southern Pines
Milling, Mrs. James Reaves ..... Waynesville
Millman, Mrs. Theodore Harris
105 Glovinia St. ..... Leaksville
Mills, Mrs. Hugh Harrison
McCall Rd. ..... Forest City
Mills, Mrs. Wardell Hardee
1202 Country Club Dr. ..... Greensboro
Minges, Mrs. Ray Donald
Longmeadow Rd. ..... Greenville
Minick, Mrs. James Elder, E. Main St., Booneville
Mitchell, Mrs. George William
807 W. Kenan St. ..... Wilson
Mitchell, Mrs. Landis Patterson
Huntley St. ..... Spindale
Mitchell, Mrs. Roy Colonel ..... Mt. Airy
Mitchener, Mrs. Calvin Chambers
4865 Stafford Cl. ..... Charlotte
Mitchener, Mrs. James Samuel, Jr.
Westwood ..... Laurinburg
Mock, Mrs. Charles Glenn
117 Greylyn Dr. ..... Charlotte
Mock, Mrs. Frank Lowe, Route 3 ..... Lexington
Mohr, Mrs. Jack Elmer, 207 E. 17th ..... Lumberton
Monroe, Mrs. Clement Rosenburg
Thayer Cottage ..... Pinehurst
Monroe, Mrs. Daniel Geddie
204 Churchill Dr. ..... Fayetteville
Monroe, Mrs. Edwin Wall
215 Library St. ..... Greenville
Monroe, Mrs. John Howard
2642 Philip St. ..... Winston-Salem
Monroe, Mrs. Lance Truman
218 N. Union St. ..... Concord
Montgomery, Mrs. John Christian, Jr.
2017 Radcliffe Ave. ..... Charlotte
Montgomery, Mrs. John Christian, Sr.
1532 Queens Rd. ..... Charlotte
Montgomery, Mrs. Wayne Swope
55 Sunset Parkway ..... Asheville
Montgomery, Mrs. William Gardner
Box 990 ..... Granite Quarry
Moon, Mrs. Richard Young
49 Plymouth Circle ..... Asheville
Moore, Mrs. Burmah Dixon
McAdenville Road ..... Mount Holly
Moore, Mrs. D. Forrest, Box 136 ..... Shelby
Moore, Mrs. Davis Lee
503 E. 5th St. ..... Greenville
Moore, Mrs. Edward Eugene
32 Fairway Rd. ..... Asheville
Moore, Mrs. Horace Greeley, Jr.
2905 Harvard Dr. ..... Wilmington
Moore, Mrs. James LeGrant
2513 Colton Place ..... Raleigh
Moore, Mrs. John Andrew
1513 Independence Rd. ..... Greensboro
Moore, Mrs. Julian Alison
34 Hilltop Rd. ..... Asheville
Moore, Mrs. Laurie Walker ..... Beaufort
Moore, Mrs. Ralph Bryan
1339 Hawthorne Rd. ..... Wilmington
Moore, Mrs. Robert Alexander
2415 Warwick Rd. ..... Winston-Salem
Moore, Mrs. Robert Alexander, Jr.
605 Jennings Drive ..... Wilmington
Moore, Mrs. Robert Ashe
1734 Queens Rd., W. ..... Charlotte
Moore, Mrs. Robert Love
311 W. Washington St. ..... Bessemer City
Moore, Mrs. Roy Hardin ..... Canton
Moore, Mrs. William Locke
616 Myers Lane ..... Greensboro
Moorefield, Mrs. Robert Hoyle
203 East E St. ..... Kannapolis
Mordecai, Mrs. Alfred
806 S. Hawthrone Rd. ..... Winston-Salem
Morehead, Mrs. Robert Page
1051 Arbor Rd. ..... Winston-Salem
Morey, Mrs. Milton B. ..... Morehead City
Morgan, Mrs. Arthur Elwood
2853 Skye Dr. ..... Fayetteville
Morgan, Mrs. Benjamin Edward
1205 Alta Vista Lane ..... Rocky Mount
Morgan, Mrs. Burnice Earl
2 Cedarcliff Rd. ..... Asheville
Morgan, Mrs. Charles Hermann
1408 S. York St. ..... Gastonia
Morgan, Mrs. Grady Alexander
1 Cambridge Rd. ..... Asheville
Moricle, Mrs. Charles Hunter
1302 South Park Dr. ..... Reidsville
Morris, Mrs. Donald Shonk
2398 Warwick Rd. ..... Winston-Salem
Morris, Mrs. James Francis
803 S. Madison Ave. ..... Goldsboro
Morris, Mrs. John Watson ..... Morehead City
Morris, Mrs. Leslie Morgan
1122 S. Edgemont Ave. ..... Gastonia
Morris, Mrs. Marshal Glenn, Jr.
3700 Starmount Dr. ..... Greensboro
Morris, Mrs. Rae Henderson
67 Louise Ave. ..... Concord
Morrison, Mrs. Frank ..... Waynesville
Morrison, Mrs. Robert Holcombe
331 Fairfield Rd. ..... Fayetteville
Morrison, Mrs. Roger William
65 Sunset Parkway ..... Asheville

Morton, Mrs. Levi Thomas
2601 Cloister Dr. ..... Lincolnton
Moseley, Mrs. Charles Herbert ..... Clyde
Moss, Mrs. George Oren
Cleghorn Rd. ..... Rutherfordton
Moss, Mrs. Paul ..... Hudson
Muirhead, Mrs. Samuel John
Veterans Hospital ..... Salisbury
Mullen, Mrs. Malcolm Preston
1813 W. Nash St. ..... Wilson
Murchison, Mrs. David Reid
315 S. Third St. ..... Wilmington
Murphy, Mrs. Gibbons Westbrook
22 Hampstead Rd. ..... Asheville
Murphy, Mrs. Thomas Lynch
409 Mocksville Ave. ..... Salisbury
Myers, Mrs. Alonzo Harrison
414 Fenton Pl. ..... Charlotte
Myers, Mrs. Richard Thomas
600 Kingsbury Circle ..... Winston-Salem

Nailling, Mrs. Richard Cabot
85 St. Dunstans Rd. ..... Asheville
Nalle, Mrs. Brodie C., Sr.
906 S. College St. ..... Charlotte
Nance, Mrs. Charles Lee
1825 E. 7th St. ..... Charlotte
Nance, Mrs. Frederick Lee, Jr.
Route 3, Box 130M ..... Kannapolis
Nance, James Edwin
P. O. Box 367 ..... Kannapolis
Nance, Mrs. John Wesley
410 Powell St. ..... Clinton
Nanzetta, Mrs. Leonard Anes
2756 Windsor Rd. ..... Winston-Salem
Nash, Mrs. Thomas Palmer, III
306 E. Colonial ..... Elizabeth City
Naumoff, Mrs. Phillip, 2320 Croydon Rd., ..Charlotte
Neal, Mrs. John William, Main Street ..... Gibson
Neal, Mrs. Joseph Walter
1344 Brooks Ave. ..... Raleigh
Neal, Mrs. Rutherford Douglas
2532 Hampton Ave. ..... Charlotte
Neeland, Mrs. Eugene Crawford
1506 Grove St. ..... Wilson
Neese, Mrs. Kenneth Earl
611 Lancaster Ave. ..... Monroe
Nelson, Mrs. Charlotte
2205 Woodview Rd. ..... Kinston
Nelson, Mrs. Sully ..... Ayden
Nelson, Mrs. William Howell, Box 328 ..... Clinton
Netsky, Mrs. Martin George
1030 Deepwood Court ..... Winston-Salem
Neville, Mrs. Cecil Howell ..... Scotland Neck
Newell, Mrs. Ernest T., 314 Cooper St. ..... Dobson
Newman, Mrs. Glenn Carraway
Coharie Dr. ..... Clinton
Newman, Mrs. Harold Hastings, Jr.
11 Oak Rd. ..... Salisbury
Newsome, Mrs. Henry Clay
Box 385 ..... Pilot Mountain
Newton, Mrs. Howard Lowell
244 Hempstead Pl. ..... Charlotte
Newton, Mrs. William King
Finley Park ..... North Wilkesboro
Niblock, Mrs. Franklin Chalmers, Jr.
136 S. Union St. ..... Concord
Nichols, Mrs. Austin Flint, Box 498 ..... Roxboro
Nichols, Mrs. Rhodes Edmond, Jr.
1626 University Dr. ..... Durham
Nichols, Mrs. Thomas Rogers
306 W. Union St. ..... Morganton
Nicholson, Mrs. Henry Hale, Jr.
1822 Lynwood Rd. ..... Charlotte
Nicholson, Mrs. William McNeal
824 Anderson St. ..... Durham
Nifong, Mrs. Frank Miller ..... Clemmons
Noble, Mrs. Baxter G., 604 Rudolph ..... Goldsboro
Noel, Mrs. George Thompson
407 Knollwood Dr. ..... Kannapolis
Nolan, Mrs. James Onslow
300 Cannon Blvd. ..... Kannapolis
Norfleet, Mrs. Charles Millner, Jr.
2566 Warwick Rd. ..... Winston-Salem
Norment, Mrs. William Blount
702 Woodland Dr. ..... Greensboro
Norris, Mrs. Louis Jerome, Jr. ..... Morehead City
North, Mrs. Ellsworth Howard, Jr.
Riverview Crescent ..... Elizabeth City
Norton, Mrs. Howard Binning
Route 1, Mills River Valley ..... Horse Shoe
Norton, Mrs. John W. Roy
2129 Cowper Dr. ..... Raleigh
Nowlan, Mrs. Fagg Bernard ..... Pleasant Garden
Nowlin, Mrs. George Preston
946 Bromley Rd. ..... Charlotte
Nunnery, Mrs. William Ernest
632 S. Main ..... Rutherfordton

O'Briant, Mrs. Albert Lee, P. O. Box 245, Raeford
O'Brien, Mrs. Paul Stevens
1429 E. Chaloner Dr. ..... Roanoke Rapids
Odom, Mrs. Guy Leary
2812 Chelsea Cl., Hope Valley ..... Durham
Odom, Mrs. Robert Edwin
99 Evelyn Place ..... Asheville
Odom, Mrs. Robert Taft
1809 Virginia Rd. ..... Winston-Salem
Oehlbeck, Mrs. Luther William F., Jr.
214 Poplar St. ..... Lenoir
Oehlbeck, Mrs. Luther William F., Sr.
618 Third Ave., N. W. ..... Hickory
Oelrich, Mrs. August M.
613 Palmer Dr. ..... Sanford
Offutt, Mrs. Vernon Delmus
910 Rountree St. ..... Kinston
Ogburn, Mrs. Herbert Hammond
1806 W. Market ..... Greensboro
Ogburn, Mrs. Leon N.
1623 Canterbury Rd. ..... Raleigh
Ogburn, Mrs. Lundie Calvin
945 Kenleigh Cl. ..... Winston-Salem
Oleen, Mrs. George Gerhard, Medlin Rd. ..... Monroe
Olive, Mrs. Percy Wingate
1322 Woodland Dr. ..... Fayetteville
Oliver, Mrs. Jim Upton
2624 Fairview Rd. ..... Raleigh
Oliver, Mrs. Joseph Andrew, Box 458 ..... Rockwell
Olson, Mrs. Robert M., P. O. Box 126 ..... Kenly
O'Quinn, Mrs. Edward Nelson
1810 Princess St. ..... Wilmington
Ormand, Mrs. John William
309 Lancaster Ave. ..... Monroe
Ormond, Mrs. Allison Lee
108 Sixth Ave., N. W. ..... Hickory
Outlaw, Mrs. Jackson Kent
808 Pee Dee Ave. ..... Albemarle
Owen, Mrs. Duncan Shaw
201 Oakridge Ave. ..... Fayetteville
Owen, Mrs. George Franklin, Jr.
120 W. Lynch St. ..... Durham
Owen, Mrs. John Fletcher
2631 Fairview Rd. ..... Raleigh
Owen, Mrs. William Boyd ..... Waynesville
Owens, Mrs. Francis Leroy ..... Pinehurst
Owens, Mrs. Zack Doxey, Taylor's Beach, Camden
Owsley, Mrs. Lawrence Hayes
Beverly Heights ..... Boone

Pace, Mrs. Charles T., 936 Hill St. ..... Greensboro
Pace, Mrs. Karl Busbee, 404 Summit St., Greenville
Pace, Mrs. Samuel Eugene
1617 Market St. ..... Wilmington
Packard, Mrs. Douglas Richards
P. O. Box 22 ..... Clinton
Padgett, Mrs. Charles King
Cleveland Springs ..... Shelby

Padgett, Mrs. Philip Grover
605 N. Piedmont Ave. ..... Kings Mountain
Page, Mrs. Ernest Benjamin, Jr.
2207 Wheeler Rd. ..... Raleigh
Page, Mrs. George Dantzler
1855 Cassamia Pl. ..... Charlotte
Page, Mrs. Harvey A., Kent St. ..... Durham
Painter, Mrs. William Watson
920 N. Main St. ..... Mooresville
Palmer, Mrs. Yates Shuford, Louise Rd. .... Valdese
Palmes, Mrs. Wesley Calhoun, Jr.
440 Ridgeway Ave. ..... Statesville
Parham, Mrs. Asa Richmond
1045 Rockford Rd. ..... High Point
Parker, Mrs. Charles Council, 114 Warren .. Wilson
Parker, Mrs. John Wesley, Jr. ..... Seaboard
Parker, Mrs. Oscar Lee, 706 College St. .... Clinton
Parker, Mrs. Roy Turnage
111 Pinecrest Rd. ..... Durham
Parker, Mrs. Samuel Lester, Jr.
1202 Harding Ave. ..... Kinston
Parker, Mrs. Shepherd Falkener
Cleveland Springs ..... Shelby
Parker, Mrs. Talbot Fort, Jr.
603 Prince Ave. ..... Goldsboro
Parkinson, Mrs. Thomas William
417 Thomas Trail ..... Gastonia
Parks, Mrs. William Craig
Emerywood Estates ..... High Point
Parris, Mrs. Alva E.
1317 Drumcliff Rd. ..... Winston-Salem
Parrott, Mrs. Frank Strong
322 Mocksville Ave. ..... Salisbury
Parrott, Mrs. John Arendall
2206 Woodview Rd. ..... Kinston
Parsons, Mrs. Lacy Jack, Jr.
2404 Rowland Ave. ..... Lumberton
Parsons, Mrs. William Herbert ..... Ellerbe
Paschal, Mrs. George Washington, Jr.
3334 Alamance Dr. ..... Raleigh
Paschold, Mrs. John Henry, Park Lane, Albemarle
Pate, Mrs. Archibald Hanes
110 S. Oleander Ave. ..... Goldsboro
Pate, Mrs. James Frank, Sr. ..... Canton
Pate, Mrs. James Lloyd ..... Fairmont
Pate, Mrs. William Henry ..... Pikeville
Patrick, Mrs. Simmons Isler
2202 Greenbriar Rd. ..... Kinston
Patterson, Mrs. Carl Norris
3930 Plymouth Rd., Hope Valley ..... Durham
Patterson, Mrs. F. M. Simmons
1507 Tryon Rd. ..... New Bern
Patterson, Mrs. Fred Geer
511 Senlac Rd. ..... Chapel Hill
Patterson, Mrs. Hubert Clifton
Pittsboro Rd. ..... Chapel Hill
Patterson, Mrs. Joseph Flanner, Jr.
Trent Shores ..... New Bern
Patterson, Mrs. Joseph Halford ..... Broadway
Patton, Mrs. John Donald
56 Elk Mtn. Scenic Hwy. ..... Asheville
Patton, Mrs. William Hugh, Jr.
Terrace Pl. ..... Morganton
Payne, Mrs. Clifton G.
1203 Morgan Drive ..... Reidsville
Peak, Mrs. Latham Conrad
409 Lafayette St. ..... Clinton
Pearse, Mrs. Richard Lehmer
713 Anderson St. ..... Durham
Pearson, Mrs. Hugh Oliver, Box 26 ..... Pinetops
Pearson, Mrs. John Kent, Pearson St. ..... Apex
Peck, Mrs. Harold Artemus
425 Dogwood Lane ..... Southern Pines
Peele, Mrs. James Clarendon
1208 Perry Park Dr. ..... Kinston
Peeler, Mrs. Forrest Edwards ..... Maiden
Peete, Mrs. Charles Henry
2027 Woodrow St. ..... Durham
Pender, Mrs. John Robert, III
701 Ashworth Rd. ..... Charlotte
Penick, Mrs. George Dial
Whitehead Circle ..... Chapel Hill
Pennington, Mrs. Glenn Walton
220 Queens Road East ..... Charlotte
Pennington, Mrs. Luther Thomas
218 Homewood Dr. ..... Greensboro
Perreten, Mrs. Frank Arnold
1620 Thorncliffe Rd. ..... Winston-Salem
Perrin, Mrs. Thomas Samuel, Jr.
1761 Sterling Rd. ..... Charlotte
Perritt, Mrs. John Olin
1327 Hawthorne Rd. ..... Wilmington
Perry, Mrs. David Russell
1120 Eighth St. ..... Durham
Perry, Mrs. David Russell, Jr.
746 Sylvan Rd. ..... Winston-Salem
Perry, Mrs. Glenn Grey
702 Sunset Dr. ..... High Point
Perry, Mrs. Henry Baker, Jr.
208 Homewood Dr. ..... Greensboro
Perry, Mrs. Solomon Paul
3602 Rugby Rd., Hope Valley ..... Durham
Perryman, Mrs. Olin Charles, Jr.
3312 Anderson Dr. ..... Winston-Salem
Persons, Mrs. Elbert Lapsley
732 Anderson St. ..... Durham
Peters, Mrs. August Richard, Jr.
Washington Park ..... Washington
Pettus, Mrs. William Henry, Jr.
2051 Cassamia Pl. ..... Charlotte
Pfeiffer, Mrs. John B., Jr., Rugby Rd. ..... Durham
Phelps, Mrs. James Solomon, Jr.
4936 Tewkesbury Rd., Allen Hills ..... Charlotte
Phifer, Mrs. William Houston
Lancaster Rd. ..... Monroe
Phillips, Mrs. Charles A. Speas
525 E. Massachusetts Ave. ..... Southern Pines
Phillips, Mrs. Charles Kenneth, Box 8, ... Skyland
Phillips, Mrs. Ernest Nicholas
Finley Park ..... North Wilkesboro
Phillips, Mrs. William Allen
Greenville Sound ..... Wilmington
Pickard, Mrs. Henry Mack
5002 Oleander Dr. ..... Wilmington
Pickrell, Mrs. Kenneth L., 3 Sylvan Rd., Durham
Pierce, Mrs. Edwin
824 Chamberlain St. ..... Raleigh
Pigford, Mrs. Robert Toms
155 Colonial Dr. ..... Wilmington
Pishko, Mrs. Michael Thomas
Midland Rd. ..... Pinehurst
Pittman, Mrs. Alfred Roland, Jr.
2304 Rowland Ave. ..... Lumberton
Pittman, Mrs. Dorn Carl
Alamance Acres ..... Burlington
Pittman, Mrs. Malory Alfred
Raleigh Rd. ..... Wilson
Pittman, Mrs. Raymond Lupton, Sr.
645 Hay St. ..... Fayetteville
Pittman, Mrs. William Austin
118 Stedman Ave. ..... Fayetteville
Pitts, Mrs. William Reid
429 Eastover Rd. ..... Charlotte
Piver, Mrs. James DeCamp
202 E. Bayshore Blvd. ..... Jacksonville
Piver, Mrs. William Crawford, Jr.
Washington Park ..... Washington
Pixley, Mrs. Roland Theo
2018 Bucknell ..... Charlotte
Plonk, Mrs. George Webb
Crescent Hill ..... Kings Mountain
Plyler, Mrs. Ralph Johnson
611 Mocksville Ave. ..... Salisbury
Podger, Mrs. Kenneth Arthur
217 E. Markham Ave. ..... Durham
Pollock, Mrs. Raymond, 509 Middle St., New Bern

Pool, Mrs. Bennett Baucom
2301 Buena Vista Rd. ..... Winston-Salem
Poole, Mrs. Marvin Bailey
500 S. Layton Ave. ..... Dunn
Poole, Mrs. Robert Franklin, Jr.
1631 St. Mary's St. ..... Raleigh
Pope, Mrs. Henry T.
304 E. 17th St. ..... Lumberton
Pope, Mrs. Robert Clyde
404 Monticello Dr. ..... Wilson
Porter, Mrs. Richard Allison
Haywood Forest ..... Hendersonville
Poteat, Mrs. Hubert McNeill, Jr.
422 Church St. ..... Smithfield
Pott, Mrs. Walter Hawks
102 Lakewood Dr. ..... Greenville
Powell, Mrs. Albert Henry
1632 University Dr. ..... Durham
Powell, Mrs. Eppie Charles, Jr.
804 E. Park Ave. ..... Goldsboro
Powell, Mrs. Jack, 1951 Haywood Rd., Asheville
Powell, Mrs. William Flynn
62 Gertrude Pl. ..... Asheville
Powers, Mrs. Frank Poydras
2529 White Oak Rd. ..... Raleigh
Powers, Mrs. John Alfred
2035 Sherwood Rd. ..... Charlotte
Prather, Mrs. Fonzo Goff
131 Cambridge Rd. ..... Asheville
Prefontaine, Mrs. Joseph Edouard
901 Dover Rd. ..... Greensboro
Presley, Mrs. George Donald ..... Canton
Pressly, Mrs. Claude Lowry
1863 Cassamia Pl. ..... Charlotte
Pressly, Mrs. David Lowry
576 Dogwood Rd. ..... Statesville
Preston, Mrs. John Zennas, Hickorywood, Tryon
Prevatte, Mrs. John Edgar
514 S. First St. ..... Smithfield
Prince, Mrs. George Edward
807 Townsend Ave. ..... Gastonia
Printz, Mrs. Don Ralph
340 Midland Dr. ..... Asheville
Pritchard, Mrs. George Littleton
119 Church St. ..... Black Mountain
Pritchett, Mrs. Newton George
1705 St. Mary's St. ..... Raleigh
Proctor, Mrs. James Thornton
428 Ridgefield Rd. ..... Chapel Hill
Proctor, Mrs. Richard Culpepper
381 Westview Dr. ..... Winston-Salem
Pruitt, Mrs. George Calhoun
Lancaster Lane ..... Rockingham
Pugh, Mrs. Charles Harrison
610 S. Lee St. ..... Gastonia
Pugh, Mrs. Vernon Watson
1618 Oberlin Rd. ..... Raleigh
Pulliam, Mrs. Benjamin Eloth
Robin Hood Rd. ..... Winston-Salem
Pumphrey, Mrs. Albert Franklin
Box 627 ..... Elizabethtown
Putney, Mrs. Robert Hubbard, Jr. ..... Elm City
Queen, Mrs. Hugh Oscar, Rollins Ave. ..... Hamlet
Query, Mrs. Robert Zimri, Jr.
1901 Matheson Ave. ..... Charlotte
Quickel, Mrs. John Cephas
1140 S. Edgemont Ave. ..... Gastonia
Quinn, Mrs. Clifton Lee ..... LaGrange
Rabil, Mrs. William Edmond
1755 Buena Vista Rd. ..... Winston-Salem
Rabold, Mrs. Bernard Louis
Dogwood Hills ..... Newton
Rabold, Mrs. Leonard James
109 W. Newlyn St. ..... Greensboro
Raby, Mrs. William Thomas
2121 Bucknell Ave. ..... Charlotte
Rachlin, Mrs. Stanton A.
Veteran's Hospital ..... Fayetteville
Radford, Mrs. Howard Lee, 3 Stimson ..... Cliffside
Raiford, Mrs. Fletcher Lindsay
Haywood Forest ..... Hendersonville
Raiford, Mrs. Theodore Sidney
30 Cedarcliff Rd. ..... Asheville
Rainey, Mrs. William Thomas, Sr.
1401 Ft. Bragg Rd. ..... Fayetteville
Ramsaur, Mrs. Jackson Townsend
1011 Fairfield Dr. ..... Gastonia
Ramsay, Mrs. James Graham
Washington Park ..... Washington
Ramseur, Mrs. William Lee
405 W. Mountain St. ..... Kings Mountain
Raney, Mrs. Richard Beverly
Farrington Rd. ..... Chapel Hill
Rankin, Mrs. Pressley Robinson, Jr. ..... Ellerbe
Rankin, Mrs. Richard Brandon, Jr.
217 Circle Dr. ..... Concord
Rankin, Mrs. Richard Brandon, Sr.
33 Marsh St. ..... Concord
Rankin, Mrs. Richard Eugene
Mt. Holly-Belmont Rd. ..... Mt. Holly
Rankin, Mrs. Rufus Pinkney, Jr.
622 Ashworth ..... Charlotte
Ranson, Mrs. John Lester, Jr.
2819 Glendale Rd. ..... Charlotte
Ranson, Mrs. John Lester, Sr.
620 Hermitage Ct. ..... Charlotte
Raper, Mrs. James Sidney
24 Cedarcliff Rd. ..... Asheville
Rapp, Mrs. Ira Hammes
1922 Beverly Dr. ..... Charlotte
Rasberry, Mrs. Edwin Albert, Jr.
200 S. Deans St. ..... Wilson
Rasmussen, Mrs. Glenn Steen ..... Kenansville
Rathbun, Mrs. Lewis Standish
46 Forest Rd. ..... Asheville
Ravenel, Mrs. Samuel Fitzsimons
106 Fisher Park Circle ..... Greensboro
Ray, Mrs. Frank L.
2021 Dilworth Rd., W. ..... Charlotte
Ray, Mrs. Ritz Clyde ..... West Jefferson
Rayle, Mrs. Wiley Wallace ..... Maiden
Redwine, Mrs. O. L. ..... Kenansville
Reece, Mrs. John Cochrane
Riverside Dr. ..... Morganton
Reece, Mrs. John David, 206 East North, Albemarle
Reeser, Mrs. Archibald Willard
108 Glovenia St. ..... Leaksville
Reeves, Mrs. Jerome Lyda ..... Canton
Reeves, Mrs. Robert James
920 Anderson St. ..... Durham
Register, Mrs. John Francis
803 Magnolia St. ..... Greensboro
Reid, Mrs. Charles Hamilton, Jr.
770 Oaklawn Ave. ..... Winston-Salem
Reid, Mrs. James William ..... Lowell
Reid, Mrs. Ralph Conner ..... Pineville
Reid, Mrs. Robert Leary
646 W. Park Dr. ..... Lincolnton
Reid, Mrs. William Joseph
2301 Danbury Rd. ..... Greensboro
Reinhardt, Mrs. James Franklin
803 Starmont Dr. ..... Durham
Rendleman, Mrs. David Atwell
1015 Holmes St. ..... Salisbury
Reynolds, Mrs. Ernest
1231 Richardson Dr. ..... Reidsville
Reynolds, Mrs. Frank Russell
1210 Fairway Dr. ..... Wilmington
Rhoads, Mrs. John McFarlane
2404 Prince St. ..... Durham
Rhodes, Mrs. James Kent
3350 Alamance Dr. ..... Raleigh
Rhodes, Mrs. John Sloan
2704 Vanderbilt Ave. ..... Raleigh

Rhyne, Mrs. Sam Albertus
632 Greenway Dr. ..... Statesville
Ribet, Mrs. James Ernest
State Hospital ..... Morganton
Rice, Mrs. A. Douglas, 1515 Ruffin St. ..... Durham
Rice, Mrs. Robert Scott
321 Palaside Dr. ..... Concord
Richards, Mrs. Robert D. ..... Rock Ridge
Richardson, Mrs. George Irvin
418 Piedmont St. ..... Reidsville
Richardson, Mrs. James Justis
Prince St. ..... Laurinburg
Richardson, Mrs. William Perry
Box 758 ..... Chapel Hill
Richman, Mrs. Samuel
3903 Madison Ave. ..... Greensboro
Riddle, Mrs. Harry Duff
619 W. Hillcrest Ave. ..... Gastonia
Ridge, Mrs. Clyde Franklin
609 Colonial Dr. ..... High Point
Riggs, Mrs. Millard McAdoo
W. Union St. ..... Morganton
Riley, Mrs. William Allen
617 Brent St. ..... Winston-Salem
Rippy, Mrs. William Dennis
617 N. Sellars Mill Rd. ..... Burlington
Roach, Mrs. Leonard Hunter
25 Sunset Parkway ..... Asheville
Roach, Mrs. Robert Burchell
520 Westview St. ..... Lenoir
Robbins, Mrs. Grover Jay
Clinard Road ..... Winston-Salem
Robbins, Mrs. Jack Guyes
1408 Woodborn Rd. ..... Durham
Roberson, Mrs. Robert Stuart ..... Hazelwood
Roberts, Mrs. Bennett Watson
1503 W. Pettigrew St. ..... Durham
Roberts, Mrs. Louis Carroll
3920 Plymouth Rd. ..... Durham
Roberts, Mrs. Rufus Winston
2727 Canterbury Trail ..... Winston-Salem
Roberts, Mrs. William McKinley
Babington Heights ..... Gastonia
Robertson, Mrs. Carroll Bracey ..... Jackson
Robertson, Mrs. Charles Gurney, Jr.
Country Club Dr. ..... Mt. Airy
Robertson, Mrs. Edwin Mason
1934 Hermitage Ct. ..... Durham
Robertson, Mrs. James Mebane ..... Harmony
Robertson, Mrs. John Kenneth ..... Pembroke
Robertson, Mrs. John Newton, Sr.
807 Hay St. ..... Fayetteville
Robertson, Mrs. Leon Whitfield
401 Shady Circle Dr. ..... Rocky Mount
Robertson, Mrs. Lloyd Harvey
4 North Road ..... Salisbury
Robertson, Mrs. Logan Thomas
27 Fairmont Rd. ..... Asheville
Robinson, Mrs. Charles Wilson
1114 Belgrave Pl. ..... Charlotte
Robinson, Mrs. James Elbert
2701 Buena Vista Rd. ..... Winston-Salem
Robinson, Mrs. James Thomas, Jr.
1305-D Eaton Pl. ..... High Point
Robinson, Mrs. Joe
705 McDonald Ave. ..... Hamlet
Robinson, Mrs. John Daniel, Box 207 ..... Wallace
Rodman, Mrs. Clark, Riverside ..... Washington
Rodman, Mrs. Olzie Clark
519 W. Main St. ..... Washington
Rogers, Mrs. Arthur Merriam
2115 Pinewood Cl. ..... Charlotte
Rogers, Mrs. James Rufus
130 Hillsboro St. ..... Raleigh
Rogers, Mrs. Malcolm E.
2508 Ramsey St. ..... Fayetteville
Rogers, Mrs. Max Pritchard
1112 Rolling Rd. ..... High Point
Rogers, Mrs. Seymour Shulman
1503 Alandale Rd. ..... Greensboro
Romeo, Mrs. Bruno Joseph
Laurel Park ..... Hendersonville
Romm, Mrs. William Henry
Puddin' Ridge ..... Moyock
Rose, Mrs. Abraham Hewitt, Jr.
723 Lake Boone Trail ..... Raleigh
Rose, Mrs. Abraham Hewitt
543 Hancock St. ..... Smithfield
Rose, Mrs. Ira Woodall, Jr.
1319 Canterbury Rd. ..... Raleigh
Rose, Mrs. James William ..... Pikeville
Ross, Mrs. Donald MacConnell
418 Fountain Pl. ..... Burlington
Ross, Mrs. Joseph Alderman
1005 Pee Dee Ave. ..... Albemarle
Ross, Mrs. Otho Bescent, Jr.
680 Llewellyn Pl. ..... Charlotte
Ross, Mrs. Willis Richard
736 E. Oakwood Ave. ..... Albemarle
Rosser, Mrs. John Hays, 603 E. Front ..... Statesville
Roth, Mrs. O. Ralph
2900 Idlewood Circle ..... Charlotte
Rousseau, Mrs. James Parks
808 Oaklawn Ave. ..... Winston-Salem
Rowe, Mrs. Charles Roy, Jr.
633 Margaret Rd. ..... Statesville
Royal, Mrs. Benjamin Franklin ..... Morehead City
Royal, Mrs. Donnie Martin
Box 156 ..... Salemburg
Royster, Mrs. Chauncey Lake
2607 Fairview Rd. ..... Raleigh
Royster, Mrs. James Dan, Box 68 ..... Benson
Ruark, Mrs. Robert James
3132 Sussex Rd. ..... Raleigh
Rubin, Mrs. Adrian Stevens
104 Nutbush Rd. ..... Greensboro
Rubin, Mrs. Maurice Harvey
107 Battle Rd. ..... Greensboro
Ruffin, Mrs. Julian Meade
816 Anderson St. ..... Durham
Rundles, Mrs. Ralph Wayne
132 Pinecrest Rd. ..... Durham
Russell, Mrs. Jesse Milton ..... Canton
Russell, Mrs. Phillip Everitt
4 Deerfield Rd. ..... Asheville
Russell, Mrs. William Marler
1 Lone Pine Rd. ..... Asheville
Ryburn, Mrs. Samuel Benjamin
202 Rowe Ave. ..... Wilson
Sadler, Mrs. Ralph Colvert
106 S. Madison St. ..... Whiteville
Saleeby, Mrs. Richard George, Jr.
2307 Churchill Rd. ..... Raleigh
Salle, Mrs. George Fredric
Isabella Ave. ..... Washington
Salter, Mrs. Theodore ..... Beaufort
Saltzman, Mrs. Herbert, 2027 Bivins St., Durham
Sample, Mrs. Robert Cannon
Dana Rd. ..... Hendersonville
Sanders, Mrs. Lee Hyman
2502 Anderson Dr. ..... Raleigh
Sanger, Mrs. Paul Weldon
1813 Providence Rd. ..... Charlotte
Santos, Mrs. Juan J.
212 Pennsylvania Ave. ..... Winston-Salem
Sardi, Mrs. Carl Anthony
508 Willowbrook Dr. ..... Greensboro
Sargeant, Mrs. Angus Gus
322 Otteray ..... High Point
Sargent, Mrs. Winston Arthur Young ..... Burnsville
Sasser, Mrs. Patrick H., 412 E. Beech ..... Goldsboro
Saunders, Mrs. Charles Lawrence, Jr.
Wildwood Lane ..... Burlington

Saunders, Mrs. John Turner
29 Maywood Rd. ..... Asheville
Saunders, Mrs. Stanley Stewart
1322 Greenway Dr. ..... High Point
Savage, Mrs. Robert Thomas
133 Revere Rd. ..... Winston-Salem
Sawyer, Mrs. Charles Glenn
812 Sylvan Rd. ..... Winston-Salem
Sawyer, Mrs. Logan Everett
712 W. Main ..... Elizabeth City
Scarborough, Mrs. Charles Foster, Jr. ..... Star
Schafer, Mrs. Earl William
Emerywood Estates ..... High Point
Scherer, Mrs. Irvin George
Box 23 ..... Hamptonville
Schiebel, Mrs. Herman Max
1020 Anderson St. ..... Durham
Schlaseman, Mrs. Guy W., Rugby Road ..... Durham
Schoenheit, Mrs. Edward William
25 Eastwood Rd. ..... Asheville
Schrick, Mrs. Alfred
5630 Riviere Dr. ..... Charlotte
Schweizer, Mrs. Donald Conrad
2709 W. Market St. ..... Greensboro
Scott, Mrs. Alan Fulton
Mocksville Rd. ..... Salisbury
Scott, Mrs. Peter Somers
Route 2 ..... Burlington
Scott, Mrs. Samuel Floyd
Route 2 ..... Burlington
Sears, Mrs. Warren Worth
311-A Wakefield Dr. ..... Charlotte
Seavy, Mrs. Paul W.
415 Carolina Circle ..... Durham
Seear, Mrs. Torben
938 Paramount Circle ..... Gastonia
Seigman, Mrs. Edwin Lincoln
Box 105 Bunn Dr. ..... Rocky Mount
Selby, Mrs. William Elledge
1126 Belgrave Pl. ..... Charlotte
Semans, Mrs. James Hustead
1415 Bivins St. ..... Durham
Senior, Mrs. Robert Joseph
34 Hayes Rd. ..... Chapel Hill
Senter, Mrs. William Jeffress
2330 Churchill Rd. ..... Raleigh
Sessions, Mrs. John Turner, Jr.
Morgan Creek Rd. ..... Chapel Hill
Setnor, Mrs. Stanford
220 Facility Dr. ..... Fayetteville
Severn, Mrs. Henry Doeller
4 Pine Tree Rd. ..... Asheville
Shackelford, Mrs. Robert Hilliard
201 W. Pollock St. ..... Mt. Olive
Shafer, Mrs. Irving Everett, Jr.
618 Margaret Dr. ..... Statesville
Shafer, Mrs. Irving Everett, Sr.
230 W. Thomas St. ..... Salisbury
Shaffner, Mrs. Louis deS.
818 Sylvan Rd. ..... Winston-Salem
Shaia, Mrs. William Harry
2245 Mecklenburg ..... Charlotte
Shannon, Mrs. George Ward
Deweese Ave. ..... Rockingham
Sharp, Mrs. William Thomas
Veterans Hospital ..... Salisbury
Sharpe, Mrs. Eugene Baxter
288 Kenilworth ..... Asheville
Sharpe, Mrs. Frank Alexander
111 E. Hendrix St. ..... Greensboro
Shaver, Mrs. William Trantham
1105 Pee Dee Ave. ..... Albermarle
Shaw, Mrs. John Alexander
5948 Bragg Blvd. ..... Fayetteville
Shaw, Mrs. Lloyd Roosevelt
222 N. Oak St. ..... Statesville
Shearin, Mrs. W. Thad, Jr.
1163 Carolina Ave., N. ..... Carolina Beach
Shelburne, Mrs. Palmer Augustine
2311 Princess Ann St. ..... Greensboro
Shelburne, Mrs. Robert C.
159 Lakeshore Dr. ..... Asheville
Sheridan, Mrs. Robert John
1020 Tarboro St. ..... Rocky Mount
Sherrill, Mrs. Harry B. ..... Swansboro
Sherrill, Mrs. John Franklin, Jr.
3326 Rugby Rd., Hope Valley ..... Durham
Shingleton, Mrs. William Warner
3866 Summerset Dr. ..... Durham
Shinn, Mrs. George Clyde ..... China Grove
Shipley, Mrs. John LeRoy
309 W. Church ..... Elizabeth City
Shirey, Mrs. John Luther
Leicester Rd., Route 4 ..... Asheville
Shoemaker, Mrs. Carroll Clifton
Route 2 ..... Burlington
Shook, Mrs. Earl Lester, Jr.
37 Gracelyn Rd. ..... Asheville
Shuford, Mrs. Jacob Harrison
1007 14th Ave., N. W. ..... Hickory
Shull, Mrs. William Henry
2830 Belvedere Ave. ..... Charlotte
Sieker, Mrs. Herbert Otto
204 Forestwood Dr. ..... Durham
Siewers, Mrs. Christian Fogle
1908 Winterlochen Rd. ..... Fayetteville
Sikes, Mrs. Charles Henry
3930 Madison Ave. ..... Greensboro
Sikes, Mrs. Walter Allen
State Hospital ..... Raleigh
Silver, Mrs. George A.
3910 Dover Rd. ..... Durham
Silverton, Mrs. George
502 W. 26th St. ..... Lumberton
Simmons, Mrs. Alexander Wingate
604 Glenwood Ave. ..... Burlington
Simons, Mrs. Claude Ernest, Raleigh Rd. ..... Wilson
Simpson, Mrs. Henry Hardy
Route 2 ..... Burlington
Simpson, Mrs. Paul Ervin
2612 Dover Rd. ..... Raleigh
Simpson, Mrs. Thomas E., Box 327, Walnut Cove
Simpson, Mrs. Thomas William
763 Barnsdale Rd. ..... Winston-Salem
Sinclair, Mrs. Carter Ashton
353 8th St., N. W. ..... Hickory
Sinclair, Mrs. Louis Gordon
3309 White Oak Rd. ..... Raleigh
Sinclair, Mrs. Robey Thomas, Jr.
155 Renovah Circle ..... Wilmington
Singletary, Mrs. George Currie
Box 246 ..... Clarkton
Singletary, Mrs. William Vance
32 Beverly Drive ..... Durham
Sink, Mrs. Charles Shelton
Sunset Dr. ..... North Wilkesboro
Sinnett, Mrs. John Franklin
524 W. 8th St. ..... Newton
Siske, Mrs. Grady Cornell ..... Pleasant Garden
Skeen, Mrs. Leo Brown
812 N. Main St. ..... Mooresville
Skinner, Mrs. Benjamin Smith
418 S. Duke St. ..... Durham
Slate, Mrs. Francis Wesley, Box 407 ..... Mocksville
Slate, Mrs. John Samuel
1215 W. Fourth St. ..... Winston-Salem
Slate, Mrs. Joseph Esmond
1015 Rockford Rd. ..... High Point
Slate, Mrs. Marvin Longworth
100 Brantley Circle ..... High Point
Sledge, Mrs. John Burton
507 Forest Lane ..... Charlotte

Sloan, Mrs. Allen Barry
745 N. Main St. ..... Mooresville
Sloan, Mrs. David Bryan
1116 Magnolia Pl. ..... Wilmington
Sloan, Mrs. Henry Lee, Jr.
154 Canterbury Dr. ..... Charlotte
Sluder, Mrs. Fletcher Sumpter
Chunns Cove Rd. ..... Asheville
Sluder, Mrs. Harold Miles
2245 Roswell Ave. ..... Charlotte
Smart, Mrs. Gardner Ford
58 St. Dunstans Rd. ..... Asheville
Smedberg, Mrs. George Andrew
517 Circle Drive ..... Burlington
Smeltzer, Mrs. Dave Harvey
Route 4, Box 380-K ..... Matthews
Smerznak, Mrs. John Joseph
209 E. Corban St. ..... Concord
Smethie, Mrs. William Massie ..... Wadesboro
Smith, Mrs. Albert Goodin
Summerset Dr. ..... Durham
Smith, Mrs. Albert Heyward, Jr. ..... Waynesville
Smith, Mrs. Anderson Jones ..... Black Creek
Smith, Mrs. Claiborne Thweat
208 Hickory St. ..... Rocky Mount
Smith, Mrs. David Tillerson
3437 Dover Rd. ..... Durham
Smith, Mrs. Everette Duane ..... Candler
Smith, Mrs. Franklin Carlton
2219 Radcliffe Ave. ..... Charlotte
Smith, Mrs. Harold Benjamin
Finley Park ..... North Wilkesboro
Smith, Mrs. James Jefcoat
1204 E. 3rd St. ..... Greenville
Smith, Mrs. James McNeill ..... Rowland
Smith, Mrs. Jay Leland, Jr.
225 N. Rowan Ave. ..... Spencer
Smith, Mrs. John Goodrich
200 Wildwood Ave. ..... Rocky Mount
Smith, Mrs. Joseph
1303 E. 5th St. ..... Greenville
Smith, Mrs. Joseph Pinkney
935 Paramount Circle ..... Gastonia
Smith, Mrs. Opie Norris
107 W. Avondale ..... Greensboro
Smith, Mrs. Roy Meadows
206 Homewood Dr. ..... Greensboro
Smith, Mrs. Sidney
905 Williamson Dr. ..... Raleigh
Smith, Mrs. Slade Alvah
308 N. Madison St. ..... Whiteville
Smith, Mrs. William Alexander
2310 White Oak Rd. ..... Raleigh
Smith, Mrs. William Mitchell
516 Grand Blvd. ..... Boone
Snelling, Mrs. John McLucius
1036 Queens Rd., W. ..... Charlotte
Snipes, Mrs. Richard Dean
312 Valley Rd. ..... Fayetteville
Snow, Mrs. Leo Beman
N. Anderson St. ..... Morganton
Sohmer, Mrs. Marcus Frank, Jr.
811 Arbor Rd. ..... Winston-Salem
Somers, Mrs. James E.
Sourwood Drive ..... Chapel Hill
Sommerville, Mrs. Lewis Cass
Route 3, Box 1402 ..... West Asheville
Sorrell, Mrs. Furman Yates
Box 221 ..... Wadesboro
Sowers, Mrs. Roy Gerodd
Brinn Drive ..... Sanford
Spaeth, Mrs. Walter
305 Main St. ..... Elizabeth City
Sparrow, Mrs. Harry Ward
508 S. Holden Rd. ..... Greensboro
Spaugh, Mrs. Earle, 150 McAlway ..... Charlotte
Speas, Mrs. Dallas Cleaborn
2598 Reynolda Rd. ..... Winston-Salem
Speas, Mrs. William Paul, Jr.
2519 Country Club Rd. ..... Winston-Salem
Speas, Mrs. William Paul, Sr.
437 Springdale Ave. ..... Winston-Salem
Spencer, Mrs. Frederick Brunell, Jr.
117 Lilly Ave. ..... Salisbury
Spencer, Mrs. Richard Earl
104 Batchelor Dr. ..... Greensboro
Spencer, Mrs. William Gear, Jr.
301 West End Ave. ..... Wilson
Spigner, Mrs. Prescott Bush
1107 Perry St. ..... Kinston
Spikes, Mrs. Norman O.
1023 W. Markham Ave. ..... Durham
Spillman, Mrs. Louis Cromwell, Jr.
Dodson Mill Rd. ..... Pilot Mountain
Sprunt, Mrs. William Hutchinson, Jr.
1931 Virginia Rd. ..... Winston-Salem
Sprunt, Mrs. William Hutchinson, III
Morgan Creek Rd. ..... Chapel Hill
Spudis, Mrs. Edward Verhines
Apt. 9 Wake Forest College ..... Winston-Salem
Spurr, Mrs. Charles
1845 Buena Vista Rd. ..... Winston-Salem
Squires, Mrs. Claude Babbington
2128 Malvern Rd. ..... Charlotte
Stanfield, Mrs. Elwin
516 Country Club Dr. ..... Fayetteville
Stanfield, Mrs. William Wesley
S. Layton Ave. ..... Dunn
Stanley, Mrs. Sherburn Moore ..... Enka
Stallard, Mrs. Sam Kane ..... Reidsville
Stallings, Mrs. T. Lacy
2404 White Oak Rd. ..... Raleigh
Starling, Mrs. Howard Montford
123 Pine Valley Rd. ..... Winston-Salem
Starling, Mrs. Wyman Plato ..... Roseboro
Stegall, Mrs. John Thomas
327 Oakwood Dr. ..... Statesville
Steiger, Mrs. Howard Paul
1927 Sharon Lane ..... Charlotte
Stephen, Mrs. Charles Ronald
1608 University Dr. ..... Durham
Stephens, Mrs. Freeman Irby
54 Sunset Parkway ..... Asheville
Stephens, Mrs. Richard Samuel
306 N. Ridge Dr. ..... Kannapolis
Stephenson, Mrs. Bennett Edward ..... Rich Square
Sternbergh, Mrs. Waldemar C. A.
1217 Belgrave Pl. ..... Charlotte
Stevens, Mrs. Hamilton Wright, Jr.
90 Grovewood Rd. ..... Asheville
Stewart, Mrs. Albert, Jr.
206 Hinsdale Ave. ..... Fayetteville
Stewart, Mrs. Daniel Niven, Jr.
925 4th Ave., N. W. ..... Hickory
Stewart, Mrs. Francis Asbury
722 Quarterstaff Rd. ..... Winston-Salem
Stewart, Mrs. John Reagan
515 Walnut St. ..... Statesville
Stewart, Mrs. Roy Allen
422 W. 9th St. ..... Newton
Stiff, Mrs. Audrey Olin
335 Bouchard St. ..... Valdese
Stines, Mrs. Ernest Harrison ..... Canton
Stirewalt, Mrs. Neale Summers
703 E. Lexington Ave. ..... High Point
Stockdale, Mrs. Wayne Harrop
911 S. Third St. ..... Smithfield
Stocker, Mrs. Frederick W.
1124 Forest Hills Blvd. ..... Durham
Stockton, Mrs. Irving Richard
919 Tatum Dr. ..... New Bern
Stone, Mrs. Leslie Ozburn
922 Sycamore St. ..... Rocky Mount

Stone, Mrs. Marvin Lee
1605 Riviera Dr. ..... Rocky Mount
Stoneburner, Mrs. Richard Gresham
595 Parkview Dr. ..... Burlington
Stovall, Mrs. Horace Henry
210 Homewood Dr. ..... Greensboro
Stratton, Mrs. James David
954 Henley Place ..... Charlotte
Strawcutter, Mrs. Howard Elsworth
1104 N. Chestnut St. ..... Lumberton
Street, Mrs. Murdo Eugene, Jr. ..... Glendon
Streeter, Mrs. Charles Truman
19 Warlick Street ..... Jacksonville
Stretcher, Mrs. Robert Hatfield ..... Waynesville
Strickland, Mrs. William H.
1009 Fassifern Court ..... Hendersonville
Stringfield, Mrs. James King ..... Waynesville
Stringfield, Mrs. Preston Calvin, Jr.
Finley Park ..... North Wilkesboro
Stringfield, Mrs. Thomas, Jr. ..... Waynesville
Strom, Mrs. Carl Henry, 63 Main Street, Cliffside
Strong, Mrs. Leonell Clarence, Jr.
263 E. Harper Ave. ..... Lenoir
Strong, Mrs. William M.
224 East Boulevard ..... Charlotte
Strosnider, Mrs. Charles Franklin
127 S. John St. ..... Goldsboro
Stroupe, Mrs. Albertus Ulla, Jr.
157 Oakland Ave. ..... Mount Holly
Stuckey, Mrs. Charles LeGrand
2219 Beverly Dr. ..... Charlotte
Stump, Mrs. David J.
1801 Pine View Drive ..... Raleigh
Styron, Mrs. Charles Woodrow
920 Williamson Dr. ..... Raleigh
Sugg, Mrs. William Cunningham
355 Roslyn Road ..... Winston-Salem
Suiter, Mrs. Thomas Bayton, Jr.
100 S. Taylor St. ..... Rocky Mount
Suiter, Mrs. Wester Ghio
501 Sycamore St. ..... Weldon
Summerlin, Mrs. Arthur Rogers
3407 Churchill Rd. ..... Raleigh
Summerlin, Mrs. Harry
218 E. Church St. ..... Laurinburg
Summerlin, Mrs. Robert L. ..... Dublin
Summers, Mrs. John Dent
524 Sixth St., N. W. ..... Hickory
Sumner, Mrs. Emmett Ashworth
502 Overbrook Dr. ..... High Point
Sutter, Mrs. Renzo Humberto
401 Main St. ..... Mt. Airy
Sutton, Mrs. Edward Colmery
107 Anson Ave. ..... Rockingham
Sutton, Mrs. Homer George, Jr.
3700 Reynolda Rd. ..... Winston-Salem
Swain, Mrs. Wingate E.
Washington Park ..... Washington
Swann, Mrs. Cecil Collins
21 Browntown Rd. ..... Asheville
Sweaney, Mrs. Hunter McGuire
1007 Vickers Ave. ..... Durham
Sweeney, Mrs. C. Leslie, Jr.
301 Northwood Drive ..... Raleigh
Sweeney, Mrs. Edgar Chew
513 Willoughby St. ..... Charlotte
Sykes, Mrs. Charles Louis
205 Rawley Ave. ..... Mt. Airy
Sykes, Mrs. Ralph Judson
205 Rawley Ave. ..... Mt. Airy
Sykes, Mrs. Rufus Preston, Box 428 ..... Asheboro

Takaro, Mrs. Timothy
12 Westchester Dr. ..... Asheville
Taliaferro, Mrs. Richard McCulloch
2311 Lafayette Ave. ..... Greensboro
Tally, Mrs. Bailey Thomas
N. Tenth St. ..... Albemarle
Tannenbaum, Mrs. Abraham Jack
1301 Latham Rd. ..... Greensboro
Tanner, Mrs. Kenneth Spencer, Jr.
611 S. Redgecrest Ave. ..... Rutherfordton
Tart, Mrs. James Milton, Jr.
564-A Wakefield Dr. ..... Charlotte
Tate, Mrs. Allen Denny, Jr.
415 W. Pine St. ..... Graham
Tayloe, Mrs. David Thomas
709 W. Main St. ..... Washington
Tayloe, Mrs. John Cotten
Short Drive ..... Washington
Taylor, Mrs. Alistair James
N. C. Sanatorium ..... McCain
Taylor, Mrs. Andrew DuVal
2610 Selwyn Ave. ..... Charlotte
Taylor, Mrs. Frederick Harvey
3642 Park Rd. ..... Charlotte
Taylor, Mrs. Isaac M.
U. N. C. School of Medicine ..... Chapel Hill
Taylor, Mrs. Shahane Richardson
809 Woodland Dr. ..... Greensboro
Taylor, Mrs. Thomas Jefferson
614 Franklin St. ..... Roanoke Rapids
Taylor, Mrs. Vernon Williams, Jr.
815 N. Bridge St. ..... Elkin
Taylor, Mrs. William Ivey, Sr., Box 325 ..... Burgaw
Taylor, Mrs. William Ivey, Jr.
Box 156 ..... Wilmington
Temple, Mrs. Rufus Henry
307 Wilson Ave. ..... Kinston
Templeton, Mrs. Ralph Gordon
206 W. College Ave. ..... Lenoir
Terrell, Mrs. Thomas Eugene
514 Hayworth Circle ..... High Point
Thomas, Mrs. David Pryse
Greenville Sound ..... Wilmington
Thomas, Mrs. James Valentine
149 Highland Drive ..... Leaksville
Thomas, Mrs. Walter Lee
3615 Dover Rd., Hope Valley ..... Durham
Thomas, Mrs. William Ralph
704 Cedar ..... Elizabeth City
Thompson, Mrs. Alexander Frank, Jr.
118 S. Union St. ..... Concord
Thompson, Mrs. Charles Robert
315 Highland Ave. ..... Lenoir
Thompson, Mrs. Clive Allen ..... Sparta
Thompson, Mrs. Fred Arrowwood
303 Highland Ave. ..... Lenoir
Thompson, Mrs. George Richard Cunliff
2808 Chestnut St. ..... Wilmington
Thompson, Mrs. Sanford Webb, Jr. ..... Morehead City
Thompson, Mrs. Silas Raymond
240 Cherokee Rd. ..... Charlotte
Thompson, Mrs. Winfield Lynn
1304 E. Mulberry ..... Goldsboro
Thorne, Mrs. Edward Young Cox
306 West End Ave. ..... Wilson
Thorne, Mrs. Silas Owens, Jr. ..... Morehead City
Thornhill, Mrs. Edwin Hale
2828 Lakeview Dr. ..... Raleigh
Thornhill, Mrs. George Tudor, Jr.
3021 Granville Dr. ..... Raleigh
Thorp, Mrs. Adam Tredwell
543 Avent St. ..... Rocky Mount
Thorp, Mrs. Lewis Sumner
1300 W. Thomas St. ..... Rocky Mount
Thurmond, Mrs. Jack Alfred
2715 Westfield Rd. ..... Charlotte
Thurston, Mrs. Thomas Gardiner
209 S. Ellis ..... Salisbury
Tice, Mrs. Walter Thomas
411 Hillcrest Dr. ..... High Point
Tidler, Mrs. James
702 Forest Hills Dr. ..... Wilmington

Timmerman, Mrs. William Bledsoe
1960 Queens Rd., W. ..... Charlotte
Todd, Mrs. Lester Claire
1029 Granville Rd. ..... Charlotte
Tomlin, Mrs. Edwin Merrill
58 LeCline Dr. ..... Concord
Tomlinson, Mrs. Robert Lee
W. Nash Rd. ..... Wilson
Townsend, Mrs. William Ball
2200 Pinewood Cl. ..... Charlotte
Trachtenberg, Mrs. William
Hillcrest Dr. ..... Goldsboro
Trevathan, Mrs. Gordon Earl, Jr.
1908 Forest Hill Dr. ..... Greenville
Trivette, Mrs. Parks Dewitt
547 3rd St., N. E. ..... Hickory
Troutman, Mrs. Baxter Suttles
511 Mt. View ..... Lenoir
Troxler, Mrs. Eulyss Robert
2314 Princess Ann St. ..... Greensboro
Truslow, Mrs. Roy Earl
1708 Penrose Drive ..... Reidsville
Tucker, Mrs. George Franklin ..... Zebulon
Turlington, Mrs. William Troy, Jr.
Woodland Dr. ..... Jacksonville
Turrentine, Mrs. Kilby Pairo
809 Rountree St. ..... Kinston
Tuttle, Mrs. James Gray
530 N. Fifth St. ..... Albemarle
Tuttle, Mrs. Marler Slate
201 Prof. Bldg., Tuttlewood Dr. ..... Kannapolis
Tuttle, Mrs. Reuben Gray
784 Stratford Rd. ..... Winston-Salem
Tyler, Mrs. Earl Runyon
1524 Hermitage Ct. ..... Durham
Tyndall, Mrs. Hubert Durwood
1304 Evergreen Ave. ..... Goldsboro
Tyndall, Mrs. Robert Glenn
413 Harding Ave. ..... Kinston
Tyner, Mrs. Carl Vann
205 North Patrick ..... Leaksville
Tyner, Mrs. Hugh Edward
Club Drive ..... Gastonia
Tyner, Mrs. Kenneth Vann
363 Springdale Ave. ..... Winston-Salem
Tyson, Mrs. Thomas David, Jr.
1106 Ferndale Dr. ..... High Point
Tyson, Mrs. Woodrow Wilson
1012 Wellington ..... High Point
Umphlet, Mrs. Thomas Leonard
2519 White Oak Rd. ..... Raleigh
Underwood, Mrs. Harry Burnham
125 N. Race St. ..... Statesville
Valk, Mrs. Henry Lewis
2828 Club Park Rd. ..... Winston-Salem
Valone, Mrs. James Austin
1528 Iredell Dr. ..... Raleigh
Van Blaricom, Mrs. Lawrence Stickney ..... Naples
Van Doren, Mrs. Peter
Sunset Drive ..... Hendersonville
Van Hoy, Mrs. Joe Milton
2204 Crescent Ave. ..... Charlotte
Vann, Mrs. Robert Lee
1928 Virginia Rd. ..... Winston-Salem
Vanore, Mrs. Andrew Albert
Box 456 ..... Robbins
Van Velsor, Mrs. Harry
1304 Churchill Dr. ..... Wilmington
Vaughan, Mrs. Roland Harris
N. Broad St. ..... Edenton
Veazey, Mrs. Alex Halloway
Rhododendron Dr. ..... Hendersonville
Verdery, Mrs. William Carey
1428 Raeford Rd. ..... Fayetteville
Verdone, Mrs. George Frederick
3800 Wendover Cl. ..... Charlotte
Verhoef, Mrs. Dirk ..... Huntersville
Verner, Mrs. Hugh David
2300 Westfield Rd. ..... Charlotte
Verner, Mrs. John Victor, Jr.
1917 Club Blvd. ..... Durham
Vernon, Mrs. James Taylor
120 Woodland Dr. ..... Morganton
Vernon, Mrs. James William
209 Valdese Ave. ..... Morganton
Vernon, Mrs. William Chester, Jr.
177 Woodland Rd. ..... Asheville
Vestal, Mrs. Tom A.
1222 Stockton Rd. ..... Kinston
Vetter, Mrs. John Stanley
212 Richmond Ave. ..... Rockingham
Vinson, Mrs. T. Chalmes ..... Laurel Hill
Vitolo, Mrs. Ralph E.
307 Sherman Dr. ..... Fayetteville
Vollmer, Mrs. Donald Henry
Route 2, Box 300 ..... Asheville
Vreeland, Mrs. Walling Douglas, Jr. ..... Chadbourn

Wadsworth, Mrs. Harvey B.
515 Broad St. ..... New Bern
Waggoner, Mrs. Lonnie Austin, Jr.
2549 Pinewood Rd. ..... Gastonia
Walker, Mrs. Archie DuVall, Jr.
Westover Heights ..... Edenton
Walker, Mrs. Harry Gordon
Route 4 ..... Statesville
Walker, Mrs. John Barrett, Jr.
1222 May Ct. ..... Burlington
Walker, Mrs. Samuel Haywood
63 Buchanan Ave. ..... Asheville
Walker, Mrs. Thomas English
1200 Greylyn Dr. ..... Charlotte
Wall, Mrs. George Ritchie
N. Tenth St. ..... Albemarle
Wall, Mrs. Roger Irving
2707 Cambridge Rd. ..... Raleigh
Wall, Mrs. Roscoe LeGrand, Jr.
822 N. Pine Valley Rd. ..... Winston-Salem
Wall, Mrs. William Stanley
1649 Pinecrest Rd. ..... Rocky Mount
Wallace, Mrs. John Dixon, Jr.
1019 Woodland Ave. ..... Gastonia
Waller, Mrs. Louis Clinton
Route 2, Box 136-A ..... Candler
Walsh, Mrs. Carle Douglas
921 Confederate Ave. ..... Salisbury
Walters, Mrs. Hezekiah Grover, Jr.
214 Jefferson St. ..... Whiteville
Walton, Mrs. Cyrus Leslie ..... Glen Alpine
Walton, Mrs. James Carey, 125 Maehill Dr., Lenoir
Wannamaker, Mrs. Edward Jones, Jr.
Route 3, Box 250 ..... Charlotte
Wansker, Mrs. Bernard Arthur
1524 Biltmore Dr. ..... Charlotte
Ward, Mrs. Doctor Ernest, Jr.
2206 Barker ..... Lumberton
Ward, Mrs. Ernest
1015 E. Broad St. ..... Statesville
Ward, Mrs. Frank Pelouze
1105 Riverside Dr. ..... Lumberton
Ward, Mrs. Ivie Alphonso, 211 Church St., Hertford
Ward, Mrs. John Charles ..... LaGrange
Ward, Mrs. Wallace Clyde
1429 Canterbury Rd. ..... Raleigh
Ward, Mrs. William Titus
917 Williamson Dr. ..... Raleigh
Warren, Mrs. Joseph Benjamin ..... Oriental
Warren, Mrs. Julian Marion ..... Spring Hope
Warren, Mrs. Robert Lee
510 W. Harnett St. ..... Dunn
Warrick, Mrs. Luby Albert, Route 1 ..... Goldsboro
Warshauer, Mrs. Albert David
218 Forest Hills Drive ..... Wilmington
Warshauer, Mrs. Samuel Edward
2943 Hydrangea Pl. ..... Wilmington

Warwick, Mrs. Hight Claudius
2320 Kirkpatrick Pl. ..... Greensboro
Washburn, Mrs. Benjamin Earl
219 S. Ridgecrest Ave. ..... Rutherfordton
Washburn, Mrs. Willard Wyan ..... Boiling Springs
Wassink, Mrs. William Klein
Route #343 ..... Shiloh
Watkins, Mrs. Carlton Gunter
1223 Marlewood Terrace ..... Charlotte
Watkins, Mrs. William Merritt
1423 Arcadia St. ..... Durham
Watson, Mrs. George A.
4023 Bristol Rd. ..... Durham
Watson, Mrs. Robert A., Box 487 ..... Elon College
Watters, Mrs. Vernon Gregg, Jr.
204 Rockingham Rd. ..... Rockingham
Watts, Mrs. Walter Moore
40 Canterbury Rd. ..... Asheville
Way, Mrs. John Edward ..... Beaufort
Way, Mrs. Samuel Eason
625 S. Taylor St. ..... Rocky Mount
Wear, Mrs. John Edmund
Country Club ..... Salisbury
Weatherly, Mrs. Carl Holmes
1603 Independence Rd. ..... Greensboro
Weathers, Mrs. Bahnson
928 Monroe St. ..... Roanoke Rapids
Weathers, Mrs. Bailey Graham ..... Stanley
Weathers, Mrs. Harry Huntington
401 Roanoke Ave. ..... Roanoke Rapids
Weaver, Mrs. Richard Gray
1244 Irving St. ..... Winston-Salem
Webb, Mrs. Alexander, Jr.
1019 Cowper Dr. ..... Raleigh
Weeks, Mrs. John Francis
Winslow Acres ..... Elizabeth City
Weeks, Mrs. Kenneth Durham
1014 West Haven Blvd. ..... Rocky Mount
Weinel, Mrs. William Harvey
4014 Evergreen Road ..... Wilmington
Welfare, Mrs. Charles Randall
2641 Reynolda Rd. ..... Winston-Salem
Wellborn, Mrs. William Revere, Jr.
300 Avery Ave. ..... Morganton
Wells, Mrs. Edwin Julius
2802 Oleander Drive ..... Wilmington
Wells, Mrs. Marius Hughey
923 Haywood Rd. ..... Asheville
Welton, Mrs. David Goe
1900 Beverly Dr. ..... Charlotte
Wentz, Mrs. Irl Jesse
1721 Colony Rd. ..... Salisbury
Wessell, Mrs. John Charles
1501 Market St. ..... Wilmington
West, Mrs. Bryan Clinton
Perry Park Dr. ..... Kinston
West, Mrs. Clifton Forest
Perry Park Dr. ..... Kinston
Wester, Mrs. Thaddeus Bryan
508 W. 28th ..... Lumberton
Westmoreland, Mrs. Joseph Robert ..... Canton
Weyher, Mrs. John E., Jr.
Overbrook Drive ..... Goldsboro
Whaley, Mrs. James Davant
605 Third Ave., N. W. ..... Hickory
Wharton, Mrs. Charles Watson
201 Meadowbrook ..... Smithfield
Whicker, Mrs. Guy Lorraine
Route 1, Box 20 ..... Kannapolis
Whicker, Mrs. Max Evans
504 S. Franklin St. ..... China Grove
Whisnant, Mrs. Albert Miller
Park Rd., Route 2 ..... Charlotte
Whitaker, Mrs. Donald Nash
1425 Canterbury Rd. ..... Raleigh
Whitaker, Mrs. James Allen
624 Falls Rd. ..... Rocky Mount
Whitaker, Mrs. Paul F.
1205 N. Queen St. ..... Kinston
Whitaker, Mrs. Richard Harper
120 N. Cherry St. ..... Kernersville
White, Mrs. Edward Russel, Jr.
2634 Reynolda Rd. ..... Winston-Salem
White, Mrs. James Stark
1807 Efland Dr. ..... Greensboro
White, Mrs. Philip Fletcher
Stanley Ave. ..... Rockingham
White, Mrs. Thomas Preston
714 N. Edgehill Rd. ..... Charlotte
White, Mrs. William Elliott
3936 Churchill Rd. ..... Charlotte
Whitehead, Mrs. Seba Loren
341 Vanderbilt Rd. ..... Asheville
Whitener, Mrs. Donald Leonard
433 Lynn Ave. ..... Winston-Salem
Whitesides, Mrs. Edward Steele
215 N. Highland St. ..... Gastonia
Whitesides, Mrs. William Carl, Jr.
1500 Coventry Rd. ..... Charlotte
Whitley, Mrs. Joseph E.
Twin Castle Apt.s ..... Winston-Salem
Whitley, Mrs. Robert Macon, Jr.
Country Club Dr. ..... Rocky Mount
Whitt, Mrs. Walter Fuller, Jr.
206 Charleston ..... Monroe
Whittington, Mrs. Claude Thomas
600 Country Club Dr. ..... Greensboro
Wiggins, Mrs. John Carroll, Jr.
785 Arbor Rd. ..... Winston-Salem
Wilder, Mrs. Roboteau Terrell
Rotary Drive ..... High Point
Wilkerson, Mrs. Charles Baynes, Sr.
517 N. Wilmington St. ..... Raleigh
Wilkerson, Mrs. Charles Baynes, Jr.
2113 Woodland Ave. ..... Raleigh
Wilkerson, Mrs. Louis Reams
2301 Dixie Trail ..... Raleigh
Wilkins, Mrs. Kenneth Worth
102 S. Pineview Ave. ..... Goldsboro
Wilkins, Mrs. Robert Bruce
1007 Minerva Ave. ..... Durham
Wilkinson, Mrs. Charles Tolbert
521 S. Main St. ..... Wake Forest
Wilkinson, Mrs. James Spencer
3029 Granville Dr. ..... Raleigh
Wilkinson, Mrs. Louis Lee
1033 Rockford Rd. ..... High Point
Wilkinson, Mrs. Robert Watson, Jr.
513 S. Main St. ..... Wake Forest
Will, Mrs. Thomas Augustine
207 N. Hoffman St. ..... Dallas
Willett, Mrs. Robert Walter
Galax Dr., Route 6 ..... Raleigh
Williams, Mrs. Charles David, Jr.
536 Seneca Place ..... Charlotte
Williams, Mrs. Charles Frederick
3203 White Oak Rd. ..... Raleigh
Williams, Mrs. Edward Jerome
301 Lancaster ..... Monroe
Williams, Mrs. Ernest Council
1008 Edgewood Circle ..... Gastonia
Williams, Mrs. Jerome Otis
105 Country Club Dr. ..... Concord
Williams, Mrs. Kenan Banks
747 Oaklawn Ave. ..... Winston-Salem
Williams, Mrs. Leonidas Polk
300 S. Granville St. ..... Edenton
Williams, Mrs. McChord
3954 Churchill Rd. ..... Charlotte
Williams, Mrs. Ralph Bertram, Jr.
714 Forest Hills Dr. ..... Wilmington
Williams, Mrs. Robert
2305 Hathaway Rd. ..... Raleigh

Williams, Mrs. Robert Weser
727 Windsor Dr. ..... Wilmington
Williams, Mrs. Roderick Thomas ..... Farmville
Williams, Mrs. Samuel Clay
201 Westview Dr. ..... Winston-Salem
Williams, Mrs. Samuel Hodges, Jr.
Old Bath Highway ..... Washington
Williams, Mrs. Thomas Franklin
Whitehead Circle ..... Chapel Hill
Williams, Mrs. Thomas Richard, Jr.
25 9th Ave., N. E. ..... Hickory
Williams, Mrs. Trevor George
Morgan St. ..... Forest City
Williford, Mrs. John Kenneth
1211 11th St. ..... Lillington
Willis, Mrs. Candler Arthur
Route 2 ..... Candler
Willis, Mrs. Harry Clay
906 W. Vance St. ..... Wilson
Willis, Mrs. Tom Vann ..... Sparta
Wilsey, Mrs. John Derrick, III
Reynolda Estates ..... Winston-Salem
Wilson, Mrs. Clarence Lafayette
212 N. Main St. ..... Lenoir
Wilson, Mrs. Frank
2317 Hathaway Rd. ..... Raleigh
Wilson, Mrs. Franklin LeRoy
1908 Sharon Rd. ..... Charlotte
Wilson, Mrs. Hadley McDee
117 Woodland Dr. ..... Boone
Wilson, Mrs. James Stepheson
1501 Washington St. ..... Durham
Wilson, Mrs. John Knox
1008 Dover Rd. ..... Greensboro
Wilson, Mrs. Leonard Livingston
301 Brentwood Ave. ..... Jacksonville
Wilson, Mrs. Samuel Allen
710 E. Park Dr. ..... Lincolnton
Wilson, Mrs. Thomas Barnette
3328 White Oak Rd. ..... Raleigh
Wilson, Mrs. Virgil Archibald
2340 Cherokee Lane ..... Winston-Salem
Wilson, Mrs. Walter Howard
2017 St. Mary's St. ..... Raleigh
Winkler, Mrs. Harry
239 Ferncliff Rd. ..... Charlotte
Winstead, Mrs. John Lindsay
302 Greene St. ..... Greenville
Wise, Mrs. Fred Eugene, Jr.
1509 Maryland Ave. ..... Charlotte
Witherington, Mrs. Dexter T.
414 Mitchell St. ..... Kinston
Withers, Mrs. Syndor Terry
701 W. Vernon Ave. ..... Kinston
Withers, Mrs. William Alphonso
2403 Country Club Dr. ..... Raleigh
Witten, Mrs. Ernest Robert Sidney
80 Wembly Rd. ..... Asheville
Wolfe, Mrs. Harold Eugene
300 S. Andrews Ave. ..... Goldsboro
Wolfe, Mrs. Hugh Claibourne
108 Beverly Place ..... Greensboro
Wolfe, Mrs. Ralph Verlon
440 N. Hawthorne Rd. ..... Winston-Salem
Wolff, Mrs. Dennis Roscoe
Cannon Court Apts. ..... Greensboro
Wolff, Mrs. George Thomas
805 Magnolia St. ..... Greensboro
Womack, Mrs. Nathan Anthony
Route 2 ..... Chapel Hill
Womble, Mrs. Edwin Cornelius ..... Wagram
Womble, Mrs. William H., Jr.
Westridge Rd., Route 9 ..... Greensboro
Wood, Mrs. Ernest Harvey, Jr.
1004 Pittsboro Rd. ..... Chapel Hill
Wood, Mrs. Frank
115 W. King St. ..... Edenton
Wood, Mrs. George Thomas, Jr.
Route 1 ..... High Point
Wood, Mrs. Hagan Emmett
W. N. C. Sanatorium ..... Black Mountain
Wood, Mrs. Sherrod Newberry ..... Enfield
Wood, Mrs. William Lupton, Sr.
Box 278 ..... Yadkinville
Wood, Mrs. William Reed
204 Rockford Rd. ..... Greensboro
Woodard, Mrs. Marshall Wayne
145 Midland Dr. ..... Asheville
Woodhall, Mrs. Maurice Barnes
4006 Dover Rd., Hope Valley ..... Durham
Woodruff, Mrs. Fred Gwyn
606 Hillcrest Dr. ..... High Point
Woodruff, Mrs. Paden Eskew
1732 Brenner Ave. ..... Salisbury
Wooten, Mrs. Cecil William, Jr.
1101 Rhem St. ..... Kinston
Wooten, Mrs. Floyd Pugh
1114 W. College St. ..... Kinston
Wooten, Mrs. John Lemuel
109 S. Harding St. ..... Greenville
Wooten, Mrs. William Isler
Maple St. ..... Greenville
Worde, Mrs. Boyd T., 504 Carver St. ..... Durham
Worden, Mrs. Neil Ashton ..... Hope Mills
Worth, Mrs. Thomas Clarkson
500 Lake Boone Trail ..... Raleigh
Wray, Mrs. James Bailey
600 Windemere Circle ..... Winston-Salem
Wrenn, Mrs. Richard Nickles
1432 Ferncliff Rd. ..... Charlotte
Wright, Mrs. Charles Newbold ..... Jarvisburg
Wright, Mrs. Frederick Starr
933 Hendersonville Rd. ..... Asheville
Wright, Mrs. Isaac Clark
329 Transylvania Ave. ..... Raleigh
Wright, Mrs. James Rhodes
3319 White Oak Rd. ..... Raleigh
Wright, Mrs. James Thurman ..... Belhaven
Wright, Mrs. John Joseph
Box 1267 ..... Chapel Hill
Wright, Mrs. Richard Brandon, Jr.
Country Club ..... Salisbury
Wright, Mrs. Samuel Martin
2003 Morganton Rd. ..... Fayetteville
Wright, Mrs. Thomas Hasel, Jr.
555 Hempstead Pl. ..... Charlotte
Wright, Mrs. William David
1222 Grayland St. ..... Greensboro
Wyche, Mrs. Joseph Thomas
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NILEVAR®

Can Speed Recovery



"Commonly, negative nitrogen balance[1] occurs during acute febrile illnesses and following traumatic events and surgical procedures." As much as 300 to 400 Gm. of nitrogen[2] may be destroyed daily in severe infections. Convalescence[1] is delayed when negative nitrogen balance is large and persistent.

NILEVAR Builds Protein, Speeds Convalescence to Complete Recovery[3-6] ". . . we were impressed[3] with the efficacy of Nilevar as an anabolic agent. All of the patients reported feeling much more vigorous and experiencing an increase in appetite. . . ."

The actions of Nilevar[4] in reversing a negative nitrogen balance—and therefore a negative protein balance—improving the appetite and increasing the sense of well-being can be expected to shorten the illness and the convalescence of these patients.

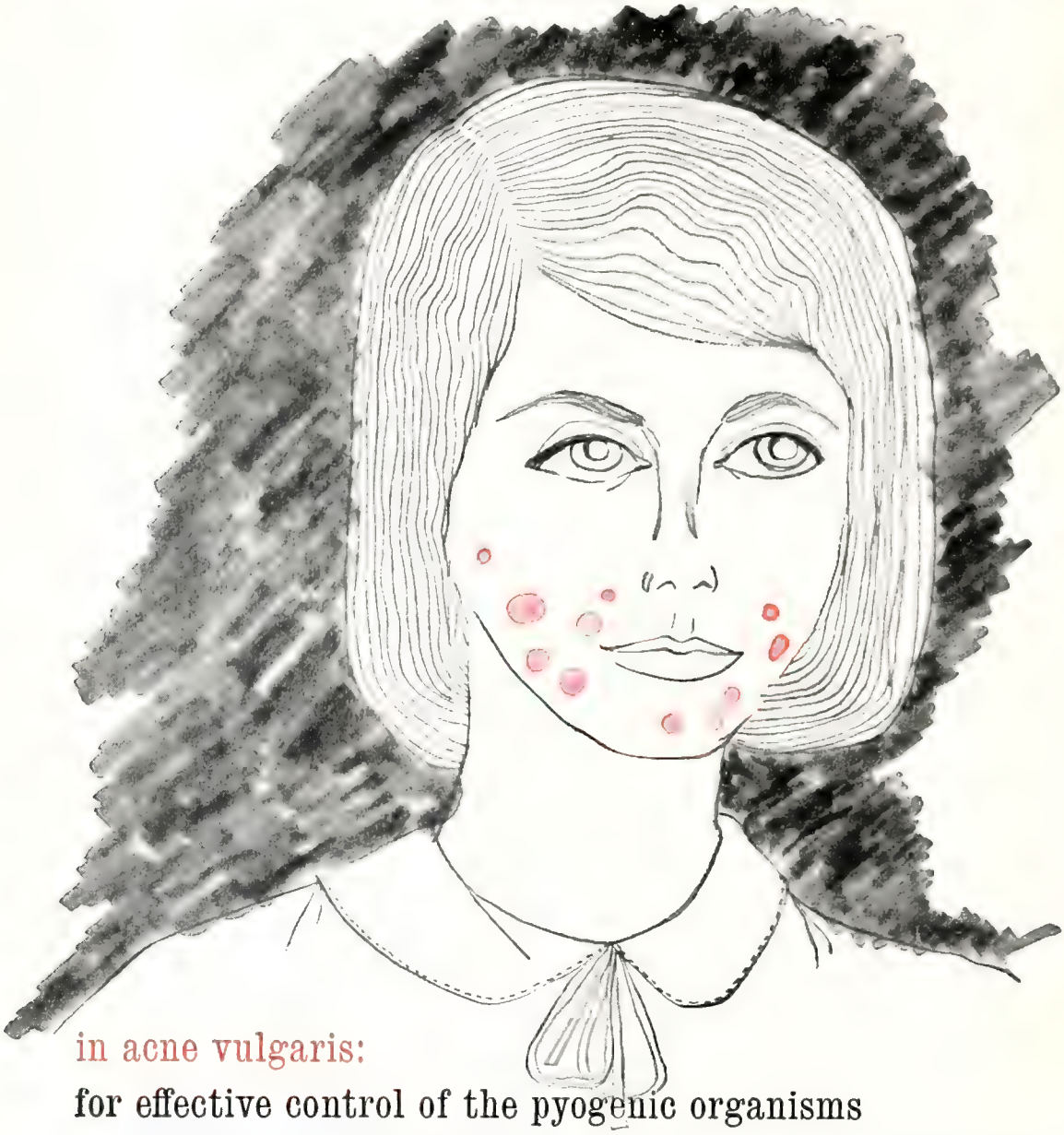
An initial daily dosage of 30 mg. of Nilevar (brand of norethandrolone) is suggested. After one to two weeks, this dosage may be reduced to 10 or 20 mg. daily in accordance with the response of the patient. Continuous courses of therapy should not exceed three months, but may be repeated after rest periods of one month. Nilevar is supplied as tablets of 10 mg., drops of 0.25 mg. per drop and ampuls of 25 mg. in 1 cc. of sesame oil with benzyl alcohol.

1. Eisen, H. N., and Tabachnick, M.: Protein Metabolism, M. Clin. North America 39:863 (May) 1955. 2. Jamison, R. M.: General Nutritive Deficiency, Virginia M. Month. 83:67 (Feb.) 1956. 3. Goldfarb, A. F.; Napp, E. E.; Stone, M. L.; Zuckerman, M. B., and Simon, J.: The Anabolic Effects of Norethandrolone, a 19-Nortestosterone Derivative, Obst. & Gynec. 11:454 (April) 1958. 4. Batson, R.: Investigator's Report, Feb. 11, 1956. 5. Weston, R. E.; Isaacs, M. C.; Rosenblum, R.; Gibbons, D. M., and Grossman, J.: Metabolic Effects of an Anabolic Steroid, 17-Alpha-Ethyl-17-Hydroxy-Norandrostenone, in Human Subjects, J. Clin. Invest. 35:744 (June) 1956. 6. Brown, C. H.: The Treatment of Acute and Chronic Ulcerative Colitis, Am. Pract. & Digest Treat. 9:405 (March) 1958.

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preventable tragedy:
permanent pitting and scarring in acne



in acne vulgaris:
for effective control of the pyogenic organisms
often responsible for permanent pitted and hypertrophic scars[1]

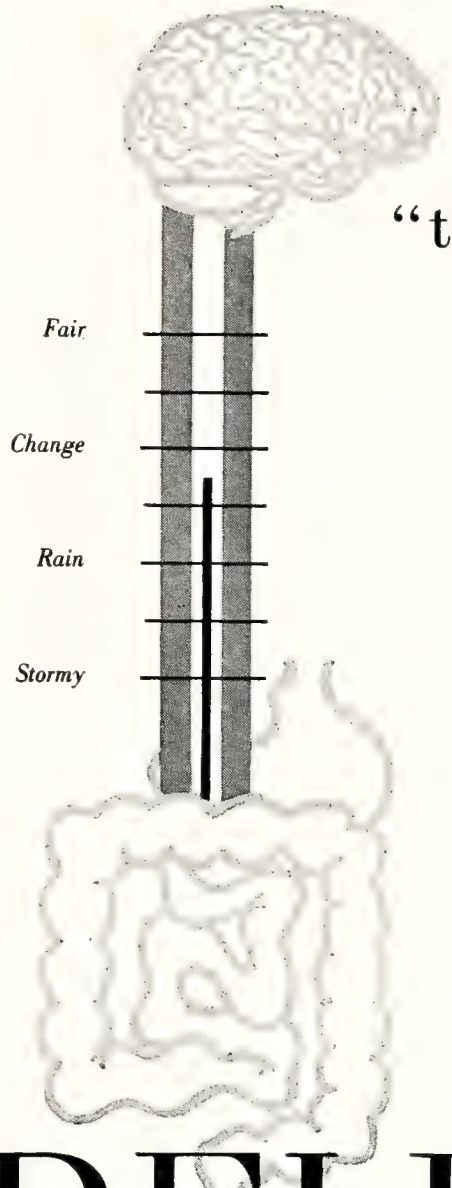
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Supply: TETREX Capsules—tetracycline phosphate complex—each equivalent to 250 mg. tetracycline HCl activity. Bottles of 16 and 100. Capsules—100 mg.—bottles of 25 and 100. Information on convenient dosage schedule available on request.

1. Rein, C. R., and Fleischmajer, R.: The efficacy of tetracycline phosphate complex (TETREX) in dermatological therapy. Antibiotic Med. & Clin. Ther. 4:422 (July) 1957.

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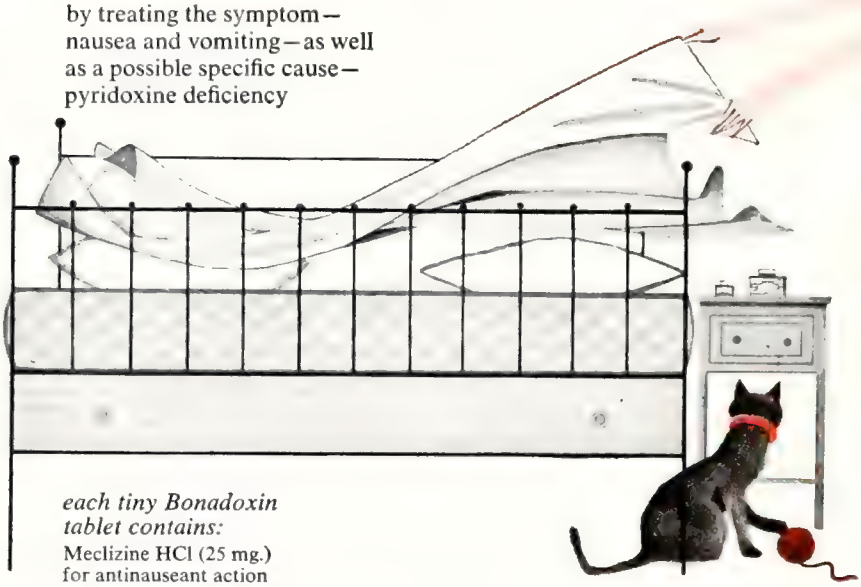
taken at bedtime

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by treating the symptom—nausea and vomiting—as well as a possible specific cause—pyridoxine deficiency





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Meclizine HCl (25 mg.) for antinauseant action
Pyridoxine HCl (50 mg.) for metabolic replacement.

usual dose: One tablet at bedtime; severe cases may require another tablet on arising.

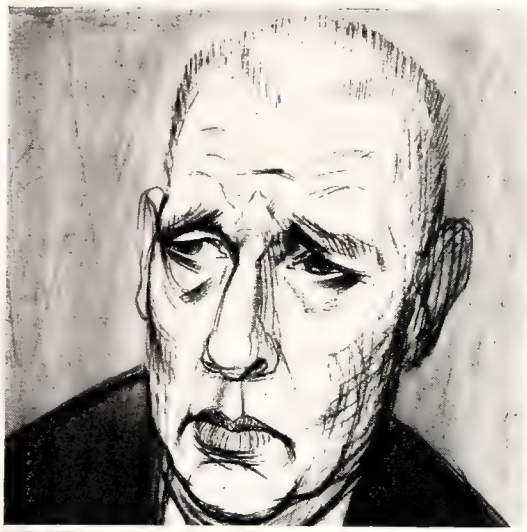
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no irritating crystals[1] · uniform concentration in each drop[2]

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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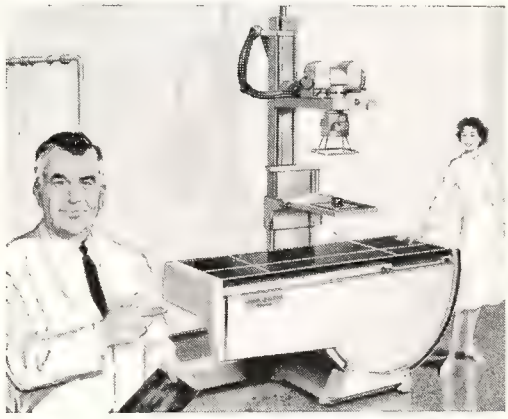
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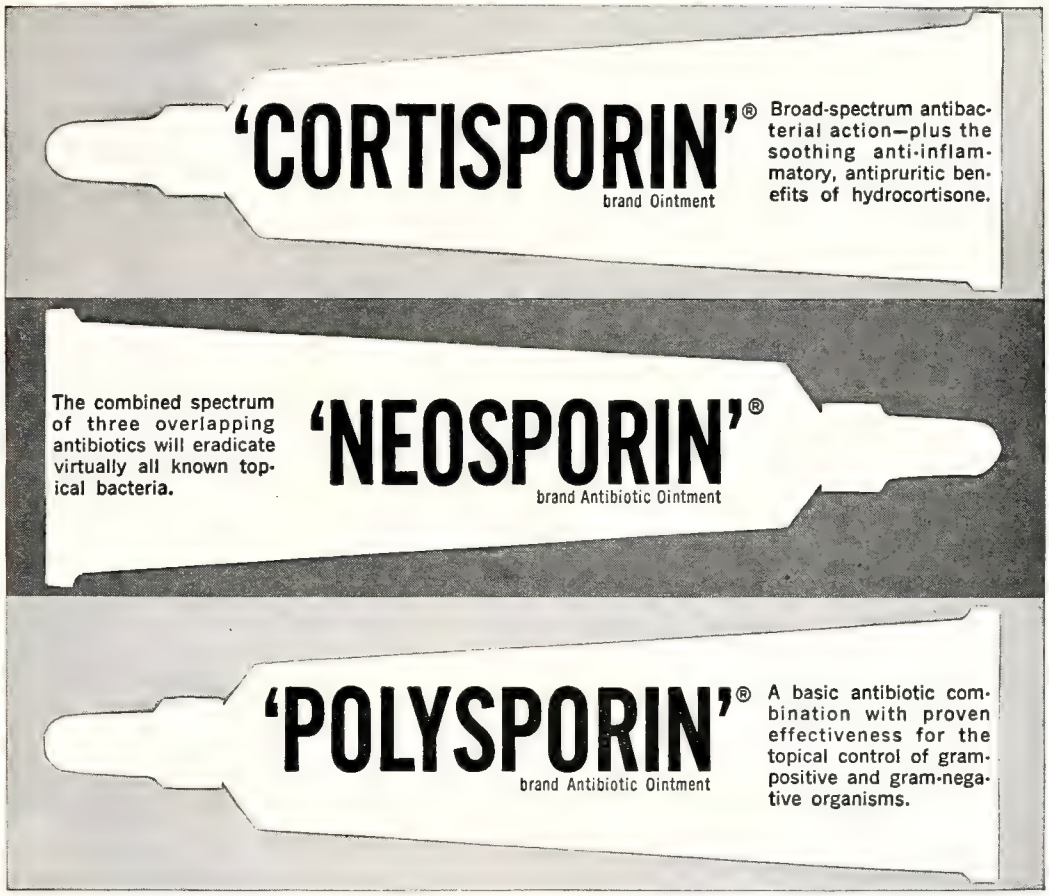
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DOSAGE: *average adult, 1 capsule four times daily.*

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Diagnostic Quandaries

Colitis? Gall Bladder Disease?
Chronic Appendicitis?
Rheumatoid Arthritis? Regional Enteritis?

A DISEASE that is frequently overlooked in solving diagnostic quandaries is amebiasis. Its symptoms are varied and contradictory, and diagnosis is extremely difficult. In one study, 56% of the cases would have been overlooked if the routine three stool specimens had been relied on.[1]

Another study found 96% of a group of 150 patients with rheumatoid arthritis were infected by *E. histolytica*. In 15 of these subjects, nine stool specimens were required to establish the diagnosis.[2]

Webster discovered amebic infection in 147 cases with prior diagnoses of spastic colon, psychoneurosis, gall bladder disease, nervous indigestion, chronic appendicitis, and other diseases. Duration of symptoms varied from one week to over 30 years. In some cases, it took as many as six stool specimens to establish the diagnosis of amebiasis.[3]

Now treatment with Glarubin provides a means of differential diagnosis in suspected cases of amebiasis. Glarubin, a crystalline glycoside obtained from the fruit of *Simarouba glauca*, is a safe, effective amebicide. It contains no arsenic, bismuth, or iodine. Its virtual freedom from toxicity makes it practical to treat suspected cases without undertaking difficult, and frequently undependable, stool analyses. Marked improvement following administration of Glarubin indicates pathologically significant amebic infection.

Glarubin is administered orally in tablet form and does not require strict medical supervision or hospitalization. Extensive clinical trials prove it highly effective in intestinal amebiasis.

Glarubin*

TABLETS

specific for intestinal amebiasis

Supplied in bottles of 40 tablets, each tablet containing 50 mg. of glaucarubin

Write for descriptive literature, bibliography, and dosage schedules.

1. Cook, J. E., Briggs, G. W., and Hindley, F. W.: Chronic Amebiasis and the Need for a Diagnostic Probe, Am. Pract. and Dig. of Treat. 6:1821 (Dec., 1955).

2. Rinehart, R. E., and Marcus, H.: Incidence of Amebiasis in Healthy Individuals, Clinic Patients and Those with Rheumatoid Arthritis, Northwest Med., 54:708 (July, 1955).

3. Webster, B. H.: Amebiasis, a Disease of Multiple Manifestations, Am. Pract. and Dig. of Treat. 9:897 (June, 1958).

*U.S. Pat. No. 2,864,745

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for control of nasal allergies and seasonal hay fever

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37.5 mg. Pyrilamine Maleate

15.0 mg. Phenylephrine Hydrochloride

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One third of the dosage disintegrates immediately to control irritating nasal secretions. The remaining dosage releases gradually to provide a therapeutic effect up to 10 to 12 hours. Only minimum side effects and low pressor.

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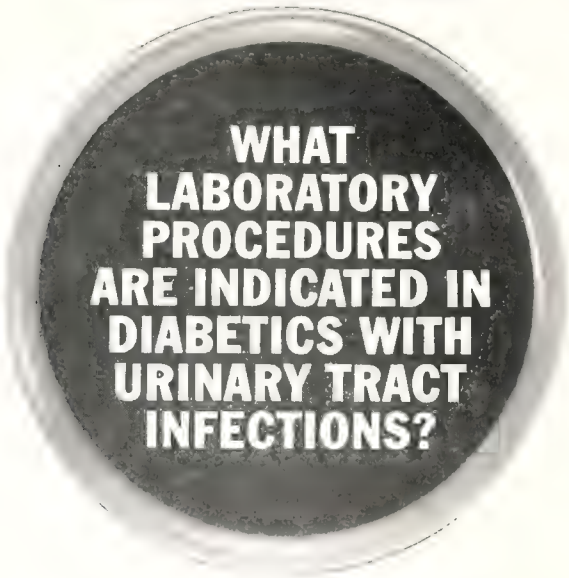
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A urine culture is absolutely essential in the diabetic suspected of having a urinary tract infection since such infection is not always accompanied by pyuria. It is also essential to keep the urine free from sugar—as shown by frequent urine-sugar tests—for successful therapy.

Source: Harrison, T. R., *et al.:* Principles of Internal Medicine, ed. 3, New York, McGraw-Hill Book Co., 1958, p. 620.

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the *standardized* urine-sugar test for reliable quantitative estimations

Urinary tract infections are about four times more frequent in the diabetic than in the non-diabetic. The prevention and treatment of urinary tract infections, as well as the avoidance of other complications of diabetes, are significantly more effective in the well-controlled diabetic. The patient should be impressed repeatedly with the importance of continued daily urine-sugar testing—especially during intercurrent illness—and warned of the consequences of relaxed vigilance.

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- *motivates patient cooperation* through everyday use of Analysis Record
- *reveals at a glance day-to-day trends* and degree of control
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WHY IS DIFFUSION IMPORTANT?

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Controls aches and fever
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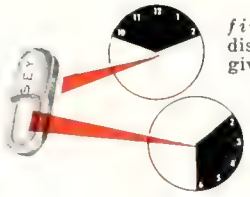
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(phenylpropanolamine HCl .....25 mg.
pheniramine maleate .....12.5 mg.
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(brand of dextromethorphan HBr)..... 30 mg.
Terpin hydrate .....180 mg.
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References: 1. Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958. 4. Bonica, J. J.: in Drugs of Choice, Mosby, St. Louis, 1958, p. 272. 5. Dascomb, H. E.: in Current Therapy, Saunders, Phila., 1958, p.78. 6. Bickerman, H. A.: in Drugs of Choice, Mosby, St. Louis, 1958, p.547.

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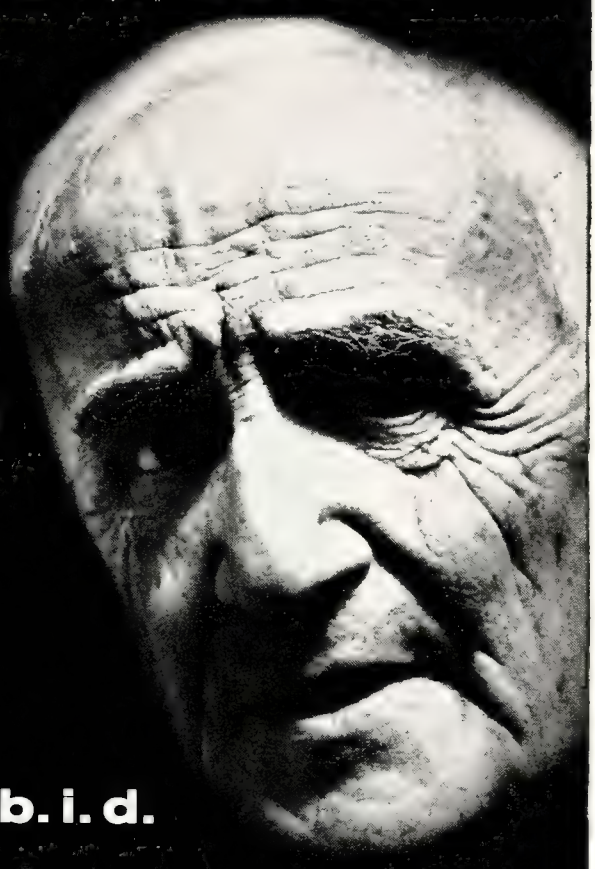
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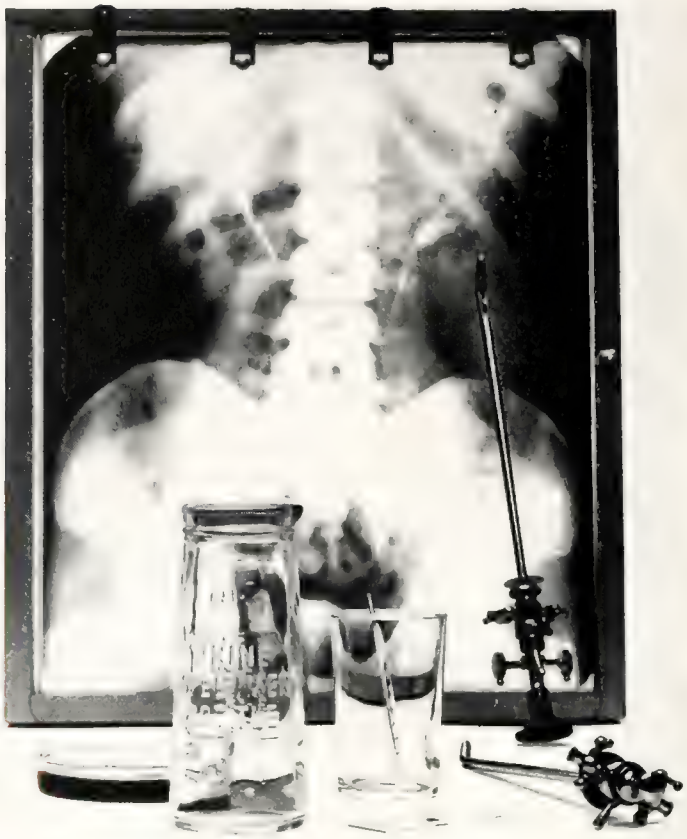


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Rapid peak attainment in 1 to 2 hours[1,2] . . . approximately one-half the time of other single-daily dose sulfas.[2] *High free levels*—as much as 95 per cent of circulating levels remaining in fully active unconjugated forms.[3] *Extremely low 2.7 per cent incidence of side effects* in toxicity studies on 223 patients.[4] Includes *total* reactions (subjective and objective), all temporary and rapidly reversed. No crystalluria reported.

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Precautions: Usual sulfonamide precautions apply.

1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: *Antibiotic Med. & Clin. Ther.* 3:378 (Nov.) 1956. 2. Boger, W. P.: In: *Antibiotics Annual* 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: *Antibiotic Med. & Clin. Ther.* 5:604 (Oct.) 1958. 4. Anderson, P. C., and Wissinger, H. A.: *U. S. Armed Forces M. J.* 10:1051 (Sept.) 1959.

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Other advantages are a balanced electrolyte pattern[1-16] and the maintenance of a favorable urinary sodium-potassium excretion ratio.[2-16] Clinical studies[1-5] have shown that the diuretic component of Rautrax-N—Naturetin—has only a slight effect on serum potassium. The supplemental potassium chloride provides additional protection against potassium depletion which may occur during long term therapy.

Rautrax-N may be used alone or in conjunction with other antihypertensive drugs, such as ganglionic blocking agents, veratrum or hydralazine, when such regimens are needed in the occasionally difficult patient.

Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin (Squibb Rauwolfia Serpentina Whole Root) and 4 mg. Naturetin (Squibb Benzydroflumethiazide), with 400 mg. potassium chloride.

Dosage: Initially-1 to 4 tablets daily after meals. Maintenance-1 or 2 tablets daily after meals; maintenance dosage may range from 1 to 4 tablets daily. For complete instructions and precautions see package insert. Literature available on request.

References: 1. Reports to the Squibb Institute, 1960. 2. David, N. A.; Porter, G. A., and Gray, R. H.: Monographs on Therapy 5:60 (Feb.) 1960. 3. Stenberg, E. S., Jr.; Benedetti, A., and Forsham, P. H.: Op. cit. 5:46 (Feb.) 1960. 4. Fuchs, M.; Moyer, J. H., and Newman, B. E.: Op. cit. 5:55 (Feb.) 1960. 5. Marriott, H. J. L., and Schamroth, L.: Op. cit. 5:14 (Feb.) 1960. 6. Ira, [illegible] H., Jr.; Shaw, D. M., and Bogdonoff, M. D.: North Carolina M. J. 21:19 (Jan.) 1960. 7. Cohen, B. M.: M. Times, to be published. 8. Breneman, G. M. and Keyes, J. W.: Henry Ford Hosp. M. Bull. 7:281 (Dec.) 1959. 9. Forsham, P. H.: Squibb Clin. Res. Notes 2:5 (Dec.) 1959. 10. Larson, E.: Op. cit. 2:10 (Dec.) 1959. 11. Kirkendall, W. M.: Op. cit. 2:11 (Dec.) 1959. 12. Yu, P. N.: Op. cit. 2:12 (Dec.) 1959. 13. Weiss, S.; Weiss, J., and Weiss, B.: Op. cit. 2:13 (Dec.) 1959. 14. Moser, M.: Op. cit. 2:13 (Dec.) 1959. 15. Kahn, A., and Grenblatt, I. J.: Op. cit. 2:15 (Dec.) 1959. 16. Grollman, A.: Monographs on Therapy 5:1 (Feb.) 1960.

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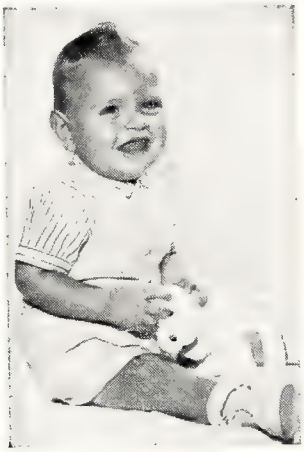
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A GUIDE TO GOOD EATING — USE DAILY

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3 to 4 glasses milk—children • 4 or more glasses—teenagers • 2 or more glasses—adults • Cheese, ice cream and other milk-made foods can supply part of the milk

MEAT GROUP

2 or more servings • Meats, fish, poultry, eggs, or cheese—with dry beans, peas, nuts as alternates

VEGETABLES AND FRUITS

4 or more servings • Include dark green or yellow vegetables; citrus fruit or tomatoes

BREADS AND CEREALS

4 or more servings • Enriched or whole-grain added milk improves nutritional values

Thus, even in reducing diets, calories from carbohydrates and fats should be included.

When combined in well-prepared meals, foods selected from each of these four food groups can satisfy the tastes, appetites and energy needs of all members of the family . . . young and old.

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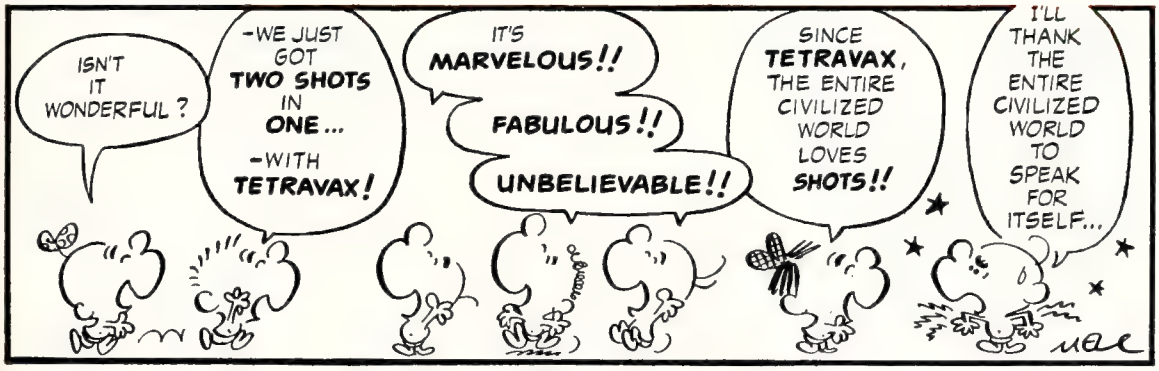
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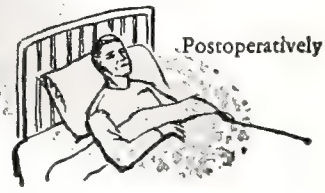
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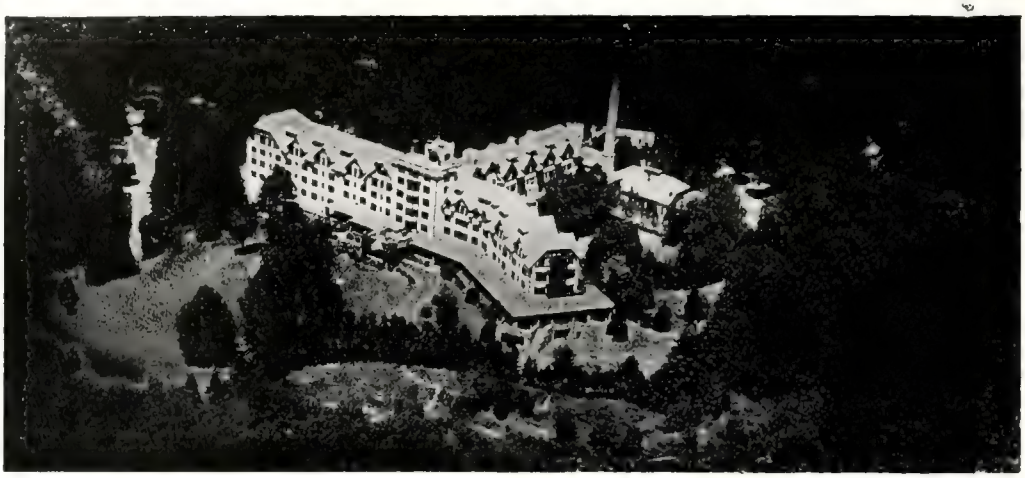
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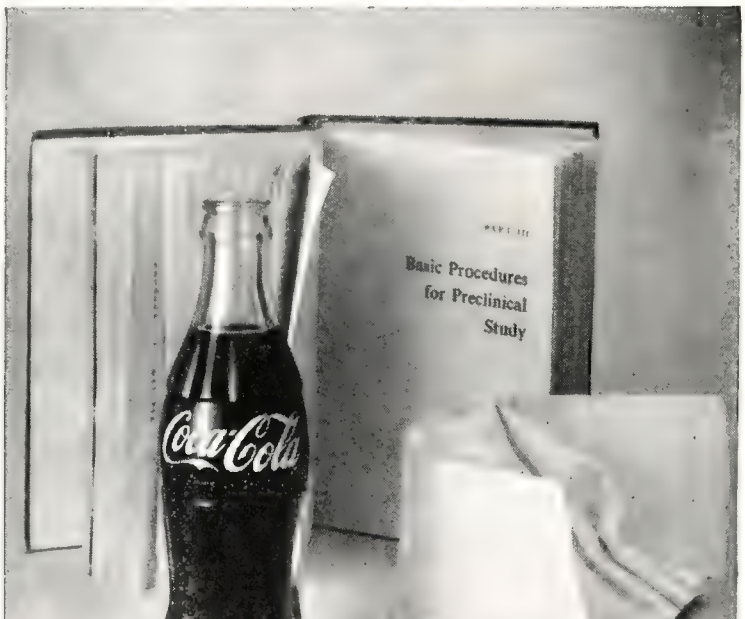
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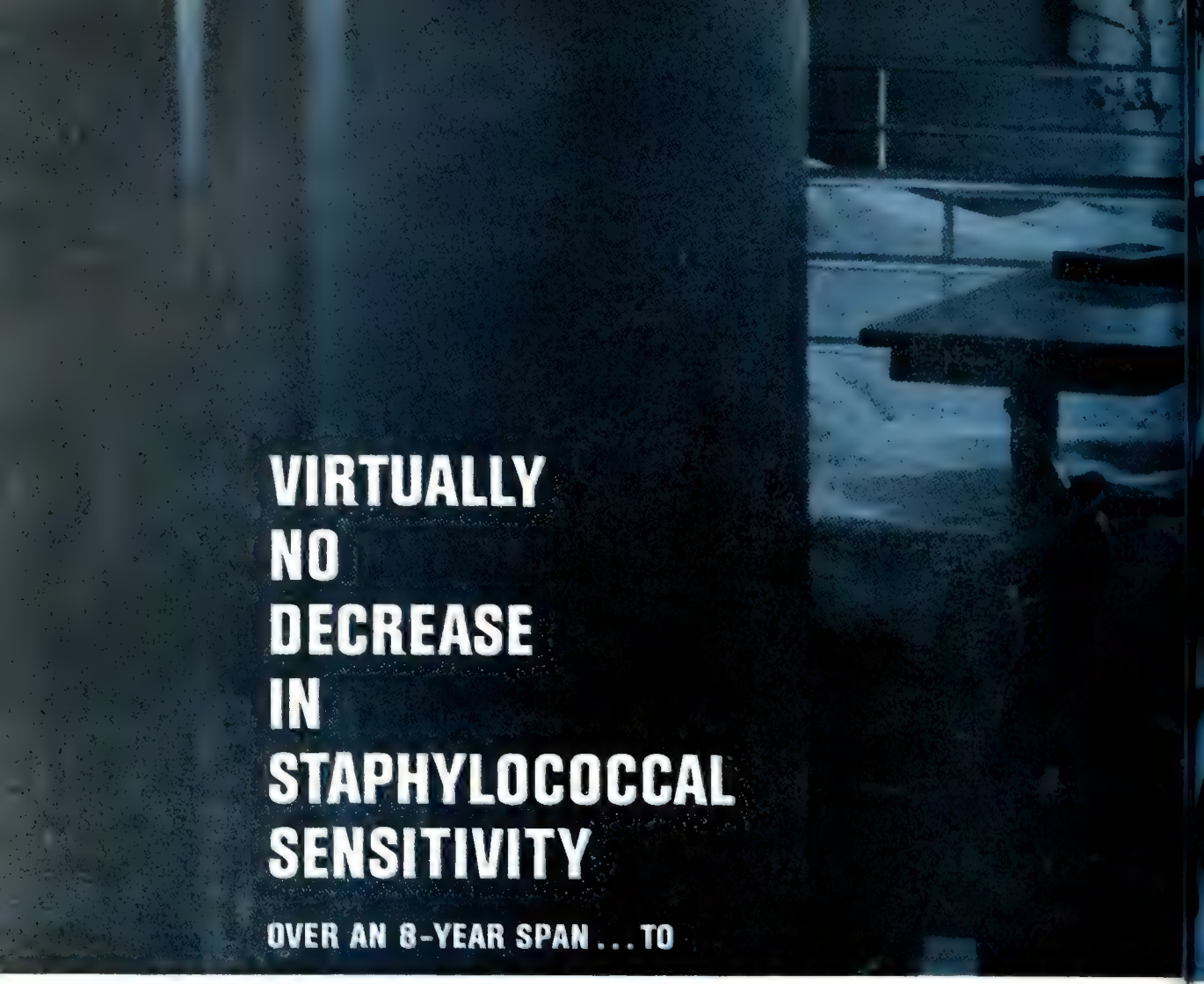
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References: (1) Welch, H., in Welch, H., & Finland, M.: Antibiotic Therapy for Staphylococcal Diseases, New York, Medical Encyclopedia, Inc., 1959, p. 1. (2) Rebhan, A. W., & Edwards, H. E.: *Canad. M. A. J.* 82:513, 1960. (3) Fisher, M. W.: *Arch. Int. Med.* 105:413, 1960. (4) Finland, M., in Welch, H., & Finland, M.: Antibiotic Therapy for Staphylococcal Diseases, New York, Medical Encyclopedia, Inc., 1959, p. 187. (5) Bercovitz, Z. T.: *Geriatrics* 15:164, 1960. (6) Glas, W. W., & Britt, E. M.: Management of Hospital Injections, in Symposium on Antibacterial Therapy, Michigan & Wayne County Acad. Gen. Pract., Detroit, September 12, 1959, p. 7. (7) Staphylococcal Infections in Pediatrics, Scientific Exhibit, Commission on Professional and Hospital Activities, 108th Ann. Meet., A. M. A., Atlantic City,



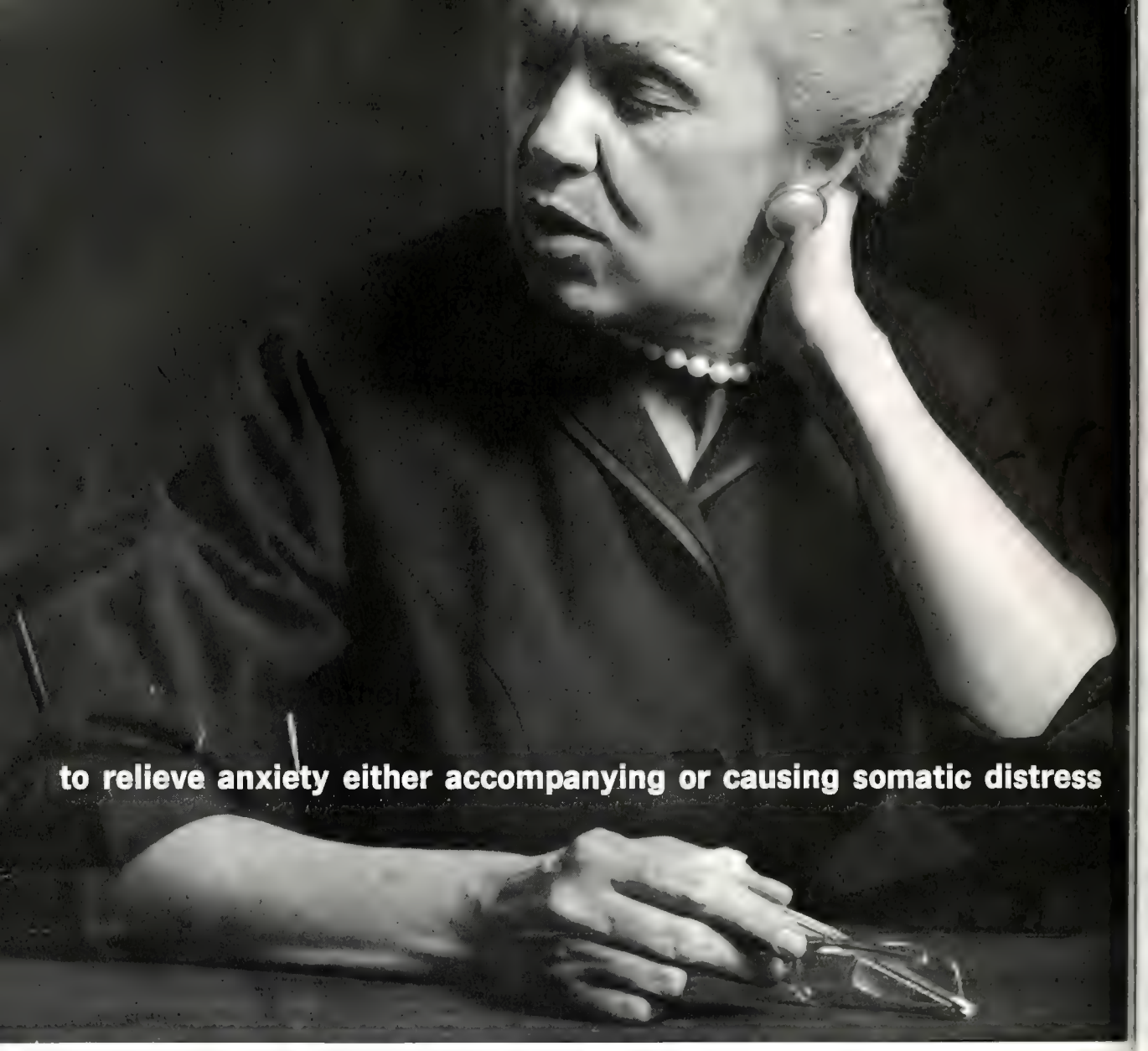
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1. Marx, F.J., in *Trifluoperazine: Further Clinical and Laboratory Studies*, Philadelphia, Lea & Febiger, 1959, p. 89.
2. Winkelman, N.W., Jr., *ibid*, p. 78

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October, 1960

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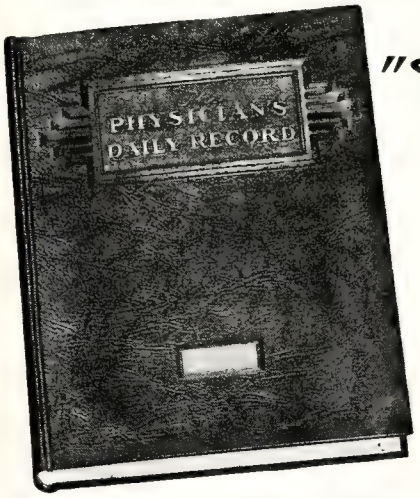
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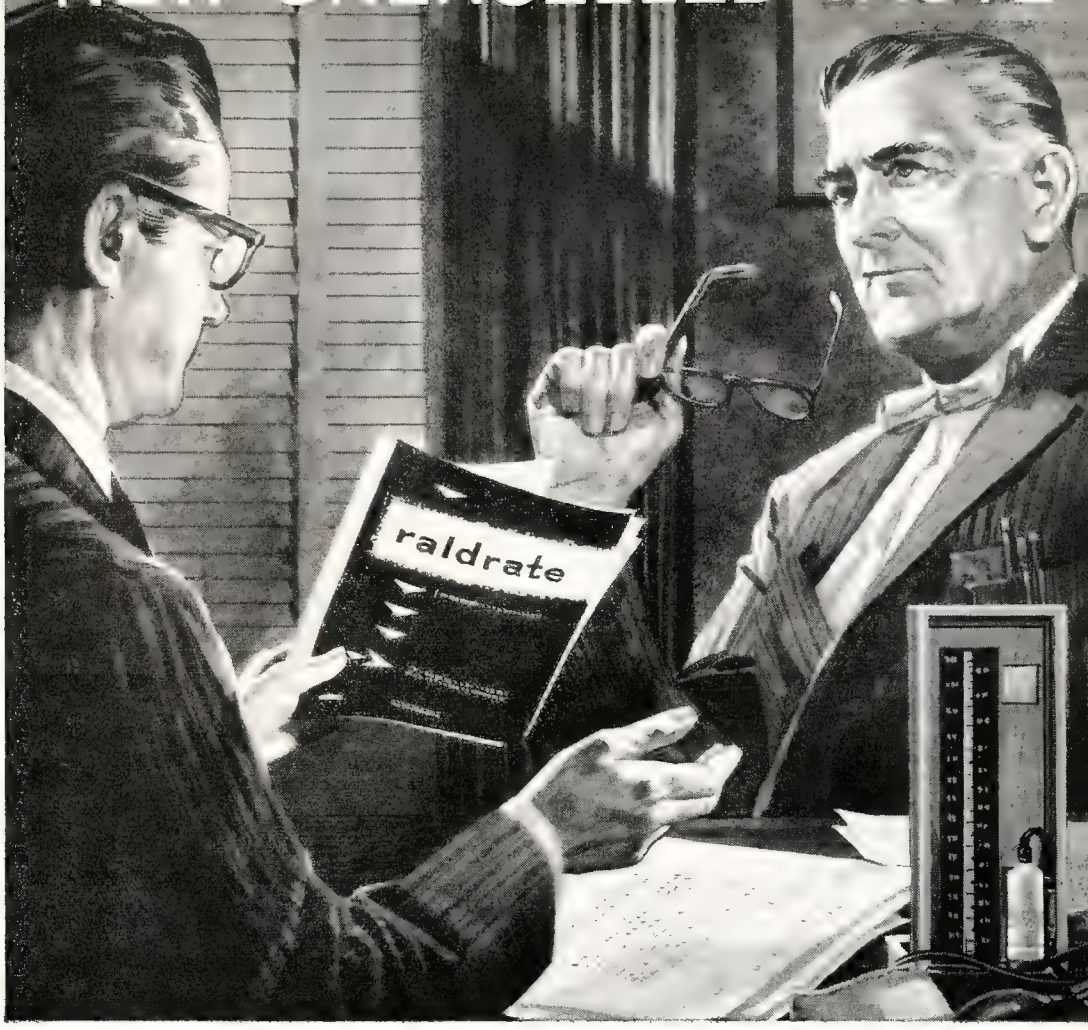
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1. Shore, P.D., Flippin, H.F., and Reinhold, J.G., Am. J. M. Sc., 218:80 (July) 1949.
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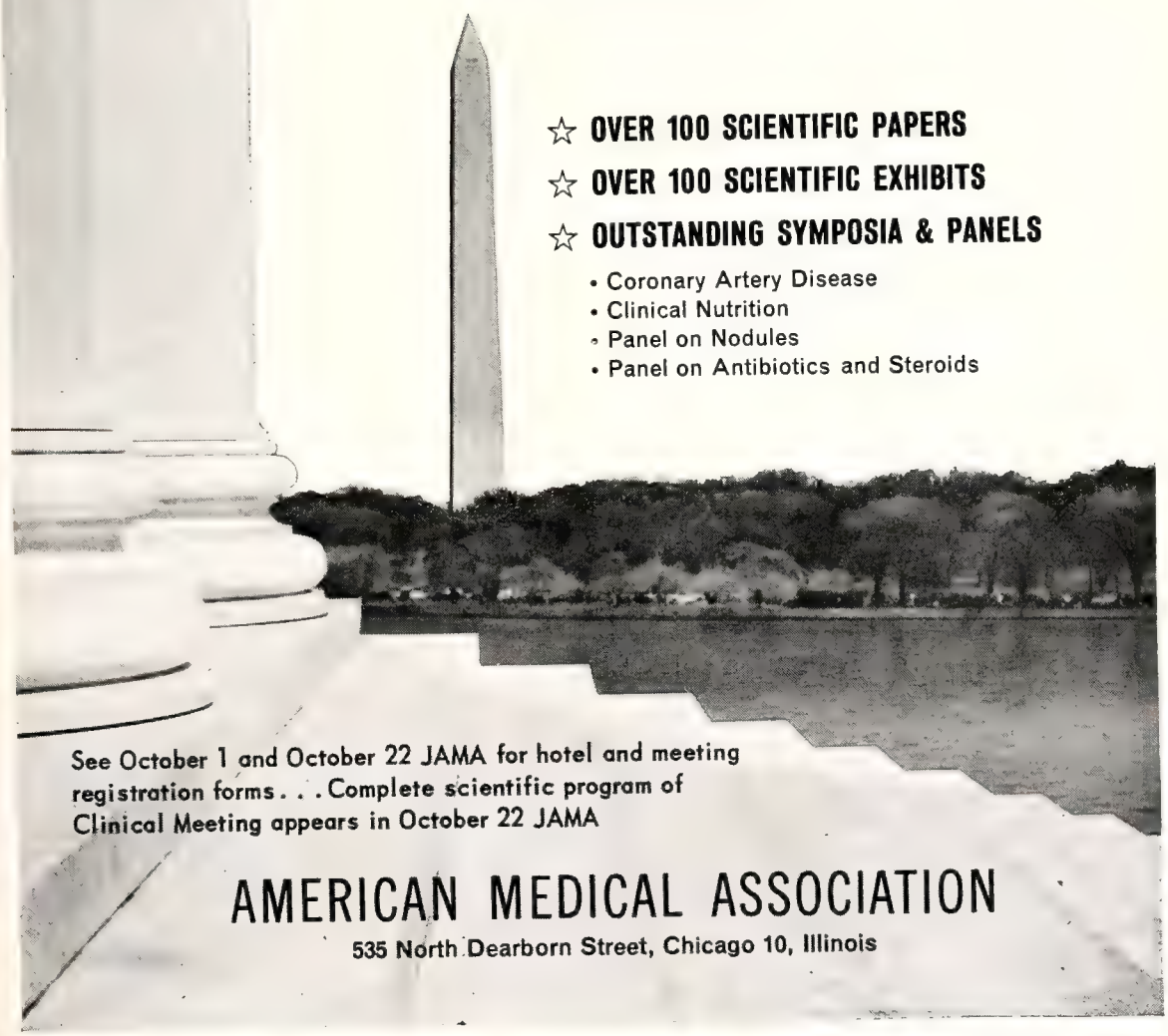
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1960. 3. Lichtman, A. L.: *Kent*
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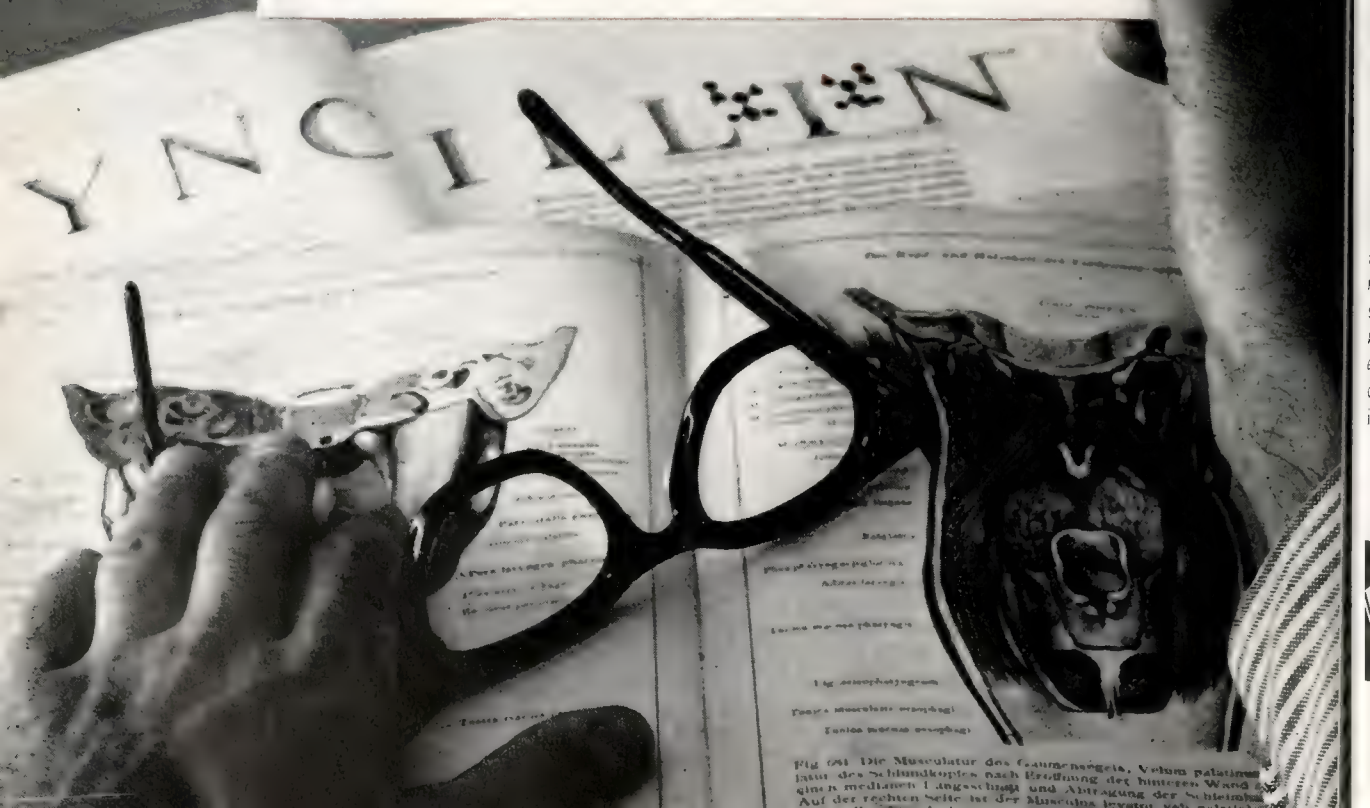
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INDICATIONS: *Hypertension* and *hypertensive cardiovascular disease. Edema,* associated with cardiac or renal insufficiency, hepatic cirrhosis, pregnancy, premenstrual syndrome, or steroid administration.

DOSAGE: Usually 1 tablet daily. Full information in official package circular.

SUPPLY: Scored 50-mg. tablets; bottles of 50. Syrup, containing 50 mg. per 5-ml. teaspoonful; bottles of 8 fl. oz.

REFERENCES: 1. Ford, R. V., and Nickell, J.: Ant. Med. & Clin. Ther. 6:461, 1959. **2.** Fuchs, M., and Mallin, S. R.: Int. Rec. Med. 172:438, 1959. **3.** Ford, R. V.: Int. Rec. Med. 172:434, 1959.

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in premenstrual tension only neo Bromth® treats the whole syndrome





It was the introduction of neo Bromth several years ago that created such widespread interest in the premenstrual syndrome—because of neo Bromth's specific ability to prevent the development of the condition in the first place.

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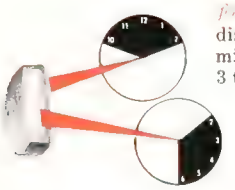


...and for humans with CLOGGED-UP NOSES...

Nasal congestion often persists with "bulldog tenacity." Nose drop and sprays often reach only the more superficial respiratory membranes and therefore fail to provide adequate relief. Furthermore they may add to the patient's misery by producing rebound congestion ciliary inhibition, and eventually "nose drop addiction." TRIAMINIC reaches *all* nasal and paranasal membranes *systemically* – provides more complete, longer-lasting relief while it avoids the harmful side effects associated with topical medication.

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Relief is prompt and prolonged because of this special timed-release action:



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then – the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:

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Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

Each tsp. (5 ml.) of Triaminic Syrup provides:
¼ the formulation of the Triaminic Tablet.
Dosage (to be administered every 3 or 4 hours):
Adults – 1 or 2 tsp.; *Children 6 to 12* – 1 tsp.;
Children 1 to 6 – ½ tsp.; *Children under 1* – ¼ tsp.

TRIAMINIC®

timed-release tablets, juvelets, and syrup

STOP *running noses*  *and open stuffed noses orally*

after milk and rest, why Donnalate?

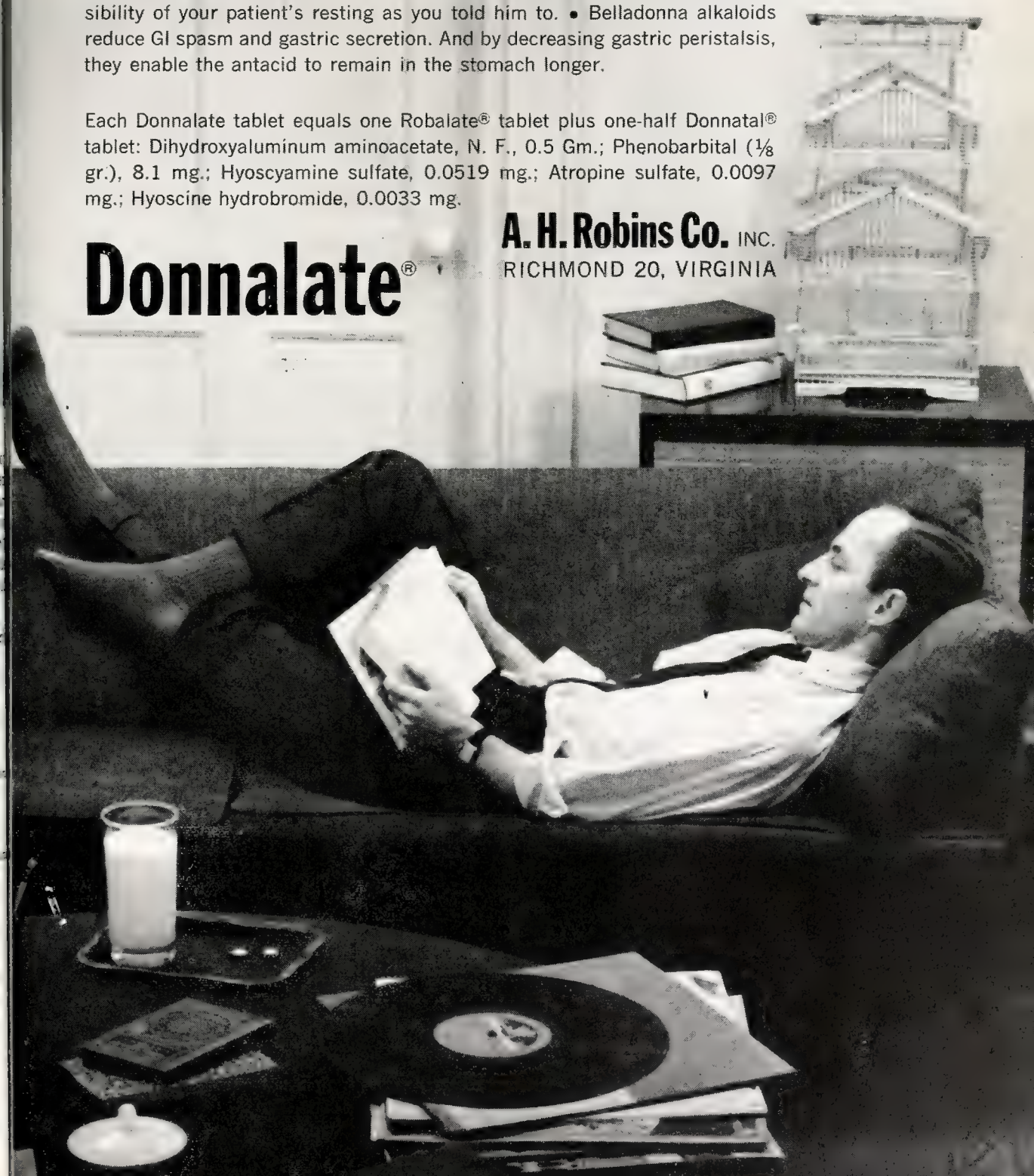
Once you've prescribed milk and rest for a peptic ulcer patient, Donnalate may be the best means for fulfilling his therapeutic regimen. This is because Donnalate combines several recognized agents which effectively complement each other and help promote your basic plan for therapy. A single tablet also simplifies medicine-taking.

in Donnalate: Dihydroxyaluminum aminoacetate affords more consistent neutralization than can diet alone. • Phenobarbital improves the possibility of your patient's resting as you told him to. • Belladonna alkaloids reduce GI spasm and gastric secretion. And by decreasing gastric peristalsis, they enable the antacid to remain in the stomach longer.

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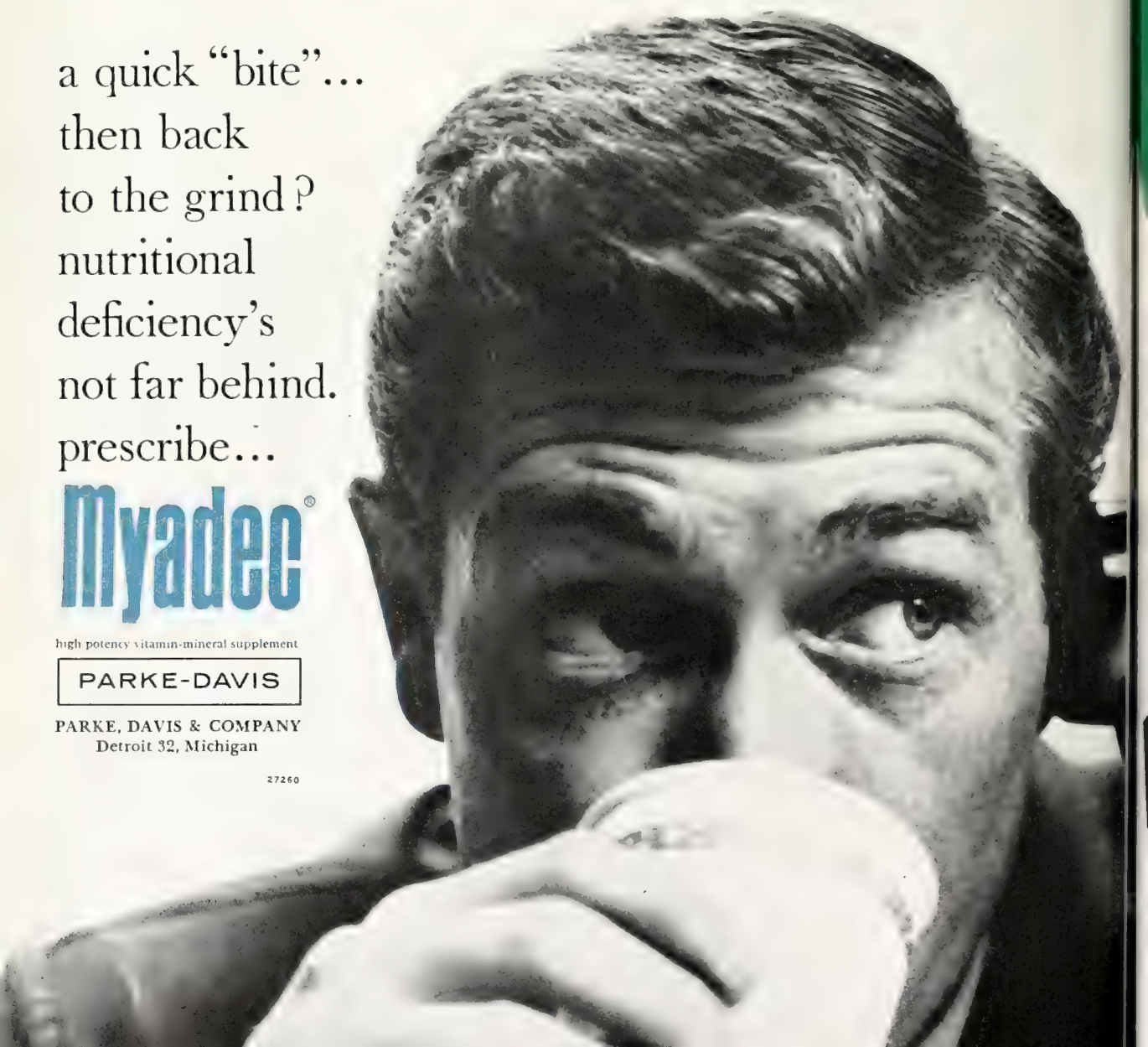
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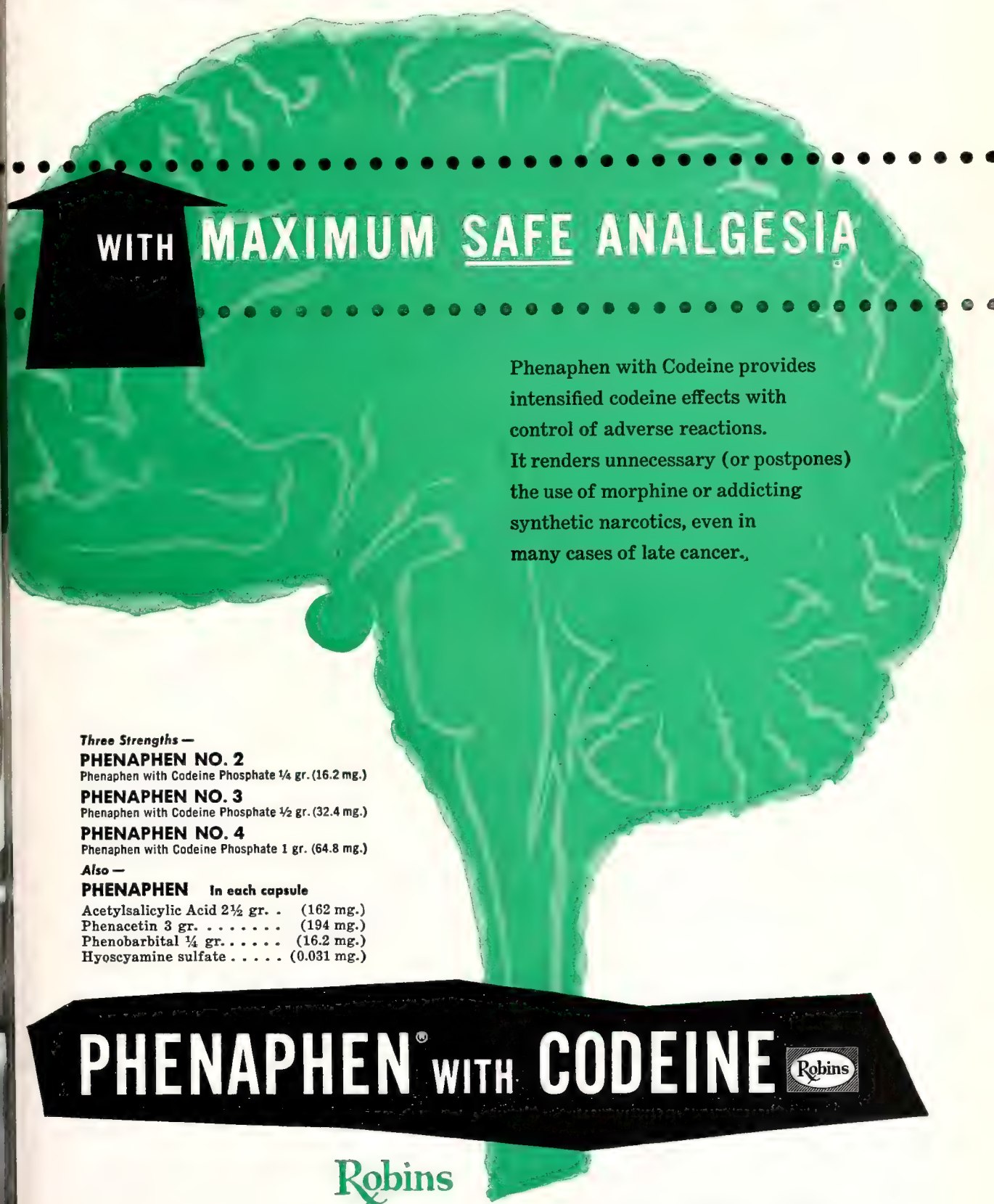
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To the relief of musculoskeletal pain, new MEDAPRIN* adds restoration of function

Analgesics offer temporary relief of musculoskeletal pain, but they merely *mask* pain rather than getting at its *cause*. New Medaprin, in addition to bringing about prompt subjective improvement, promotes the *restoration of normal function* by suppressing the inflammation that *causes* the pain.

Medaprin, Upjohn's new analgesic-steroid combination, contains aspirin plus Medrol,** the corticosteroid with *the best therapeutic ratio in the steroid field*.† Instead of suffering recurrent discomfort because of the "wearing off" of analgesics, the patient on Medaprin experiences a smooth, *extended* relief and more normal mobility.

Indications: Medaprin is indicated in mild-to-moderate rheumatic and musculoskeletal conditions, including rheumatoid arthritis, deltoid bursitis, low back pain, neuralgia, synovitis, fibromyositis, osteoarthritis, low back sprain, traumatic wrist, sciatica, and "tennis elbow."

Dosage: The recommended dosage is 1 tablet q.i.d. The usual cautions and contraindications of corticotherapy should be observed.

Supplied: In bottles of 100 and 500.

Formula: Each Medaprin tablet contains

- 300 mg. acetylsalicylic acid, for prompt relief of pain
- 1 mg. Medrol, to suppress the causative inflammation
- 200 mg. calcium carbonate, as buffer

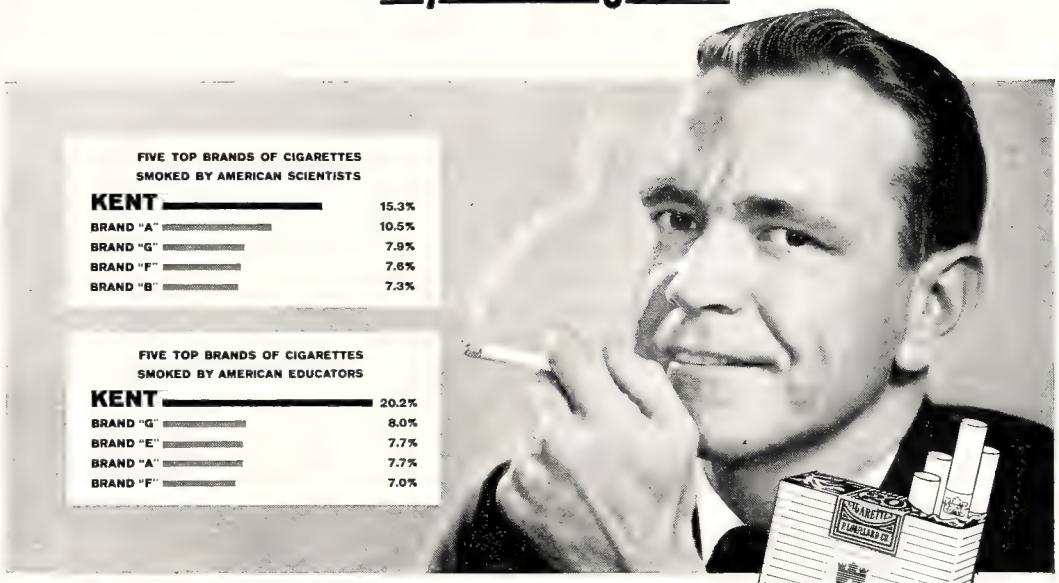
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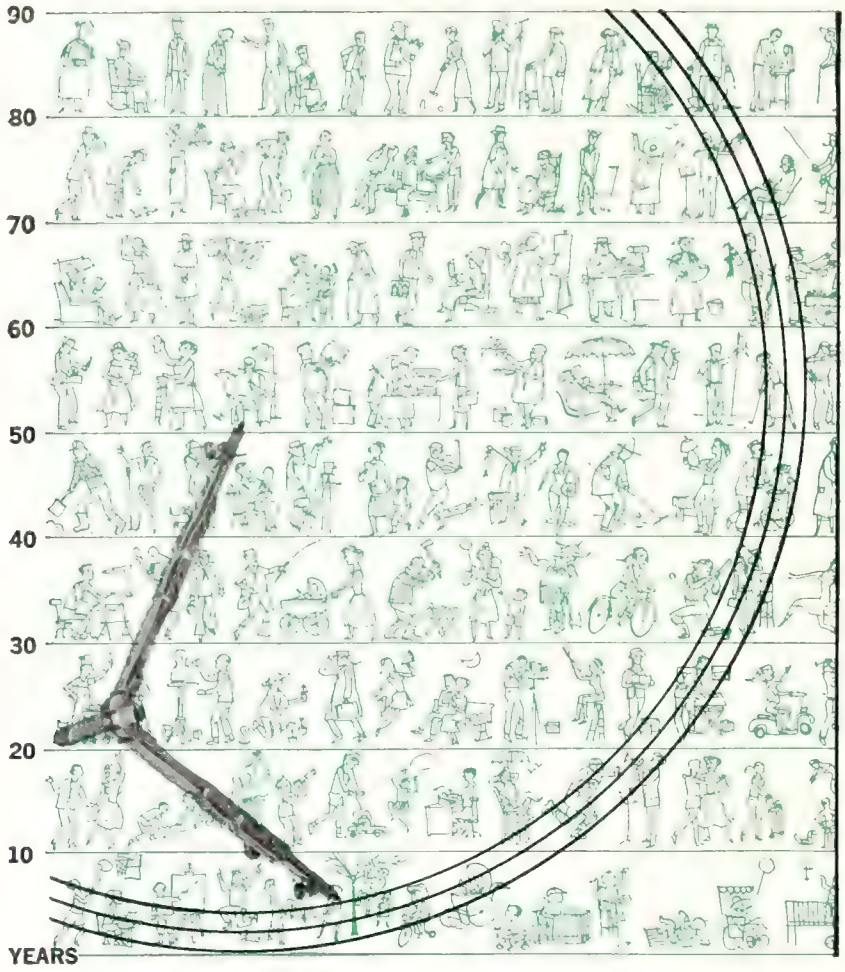
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ATARAX has a wide range of flexibility . . . from mild adult tensions and anxieties to full-blown alcoholic episodes . . . from the behavior disorders of childhood to the emotional problems of old age. Why? Because it gives you maximum adaptability of dosage . . . works quickly and predictably . . . is unsurpassed in safety.

ATARAX offers extra pharmacologic actions especially useful in certain troublesome conditions. It is antihistaminic and mildly antiarrhythmic, does not stimulate gastric secretions. Hence it is well suited to the needs of your allergic, cardiac and ulcer patients.

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Dosage: Adults, one 25 mg. tablet, or one tbsp. Syrup q.i.d. Children, 3-6 years, one 10 mg. tablet or one tsp. Syrup t.i.d.; over 6 years, two 10 mg. tablets or two tsp. Syrup t.i.d.

Supplied: Tiny 10 mg., 25 mg., and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution: 25 mg./cc. in 10 cc. multiple-dose vials; 50 mg./cc. in 2 cc. ampules. Prescription only.

Complete bibliography available on request.

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(BRAND OF HYDROXYZINE)

PASSPORT TO TRANQUILITY



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You see an improvement within a few days Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed – *often in a few days.* She eats well, sleeps well and soon returns to her normal activities.

Lifts depression...as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient – *they often aggravate anxiety and tension.*

And although amphetamine-barbiturate combinations may counteract excessive stimulation – *they often deepen depression.*

In contrast to such "seesaw" effects, Deprol's smooth, *balanced* action lifts depression as it calms anxiety – both at the same time.

Acts swiftly – the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly – often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely – no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function – frequently reported with other antidepressant drugs.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. **Supplied:** Bottles of 50 light-pink, scored tablets. Write for literature and samples.

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WHEN ULCEROGENIC FACTORS KEEP ON WORKING...



REMEMBER THIS: SO DOES ENARAX

Think of your patient with peptic ulcer—or with gastrointestinal dysfunction—on a typical day.

Think of the anxieties, the tensions.

Think, too, of the night: the state of his stomach emptied of food.

Disturbing?

Then think of ENARAX. For ENARAX was formulated to help you control precisely this clinical picture. ENARAX provides oxyphencyclimine, the inherently long-acting anticholinergic (up to 9 hours of actual achlorhydria[1]) . . . plus Atarax, the tranquilizer that doesn't stimulate gastric secretion.

Thus, with b.i.d. dosage, you provide continuous antisecretory/antispasmodic action **and** safely alleviate anxiety . . . with these results: ENARAX has been proved effective in 92% of G.I. patients.[2-4]

When ulcerogenic factors seem to work against you, let ENARAX work *for* you.

ENARAX® B.I.D.

(10 MG. OXYPHENCYCLIMINE PLUS 25 MG. ATARAX®†) A SENTRY FOR THE G.I. TRACT

dosage: Begin with one-half tablet b.i.d.—preferably in the morning and before retiring. Increase dosage to one tablet b.i.d. if necessary, and adjust maintenance dose according to therapeutic response. Use with caution in patients with prostatic hypertrophy and only with ophthalmological supervision in glaucoma.

supplied: In bottles of 60 black-and-white scored tablets. Prescription only.

References: 1. Steigmann, F., **et al.**: Am. J. Gastroenterol. **33**:109 (Jan.) 1960. 2. Hock, C. W.: to be published. 3. Leming, B. H., Jr.: Clin. Med. **6**:423 (Mar.) 1959. 4. Data in Roerig Medical Department Files.

†brand of hydroxyzine

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to contain the bacteria-prone cold

safe antibiosis

Triacetyloleandomycin, equivalent to oleandomycin 125 mg. This is the URI antibiotic, clinically effective against certain antibiotic-resistant organisms.

fast decongestion

Triaminic®, 25 mg., three active components stop running noses. Relief starts in minutes, lasts for hours.

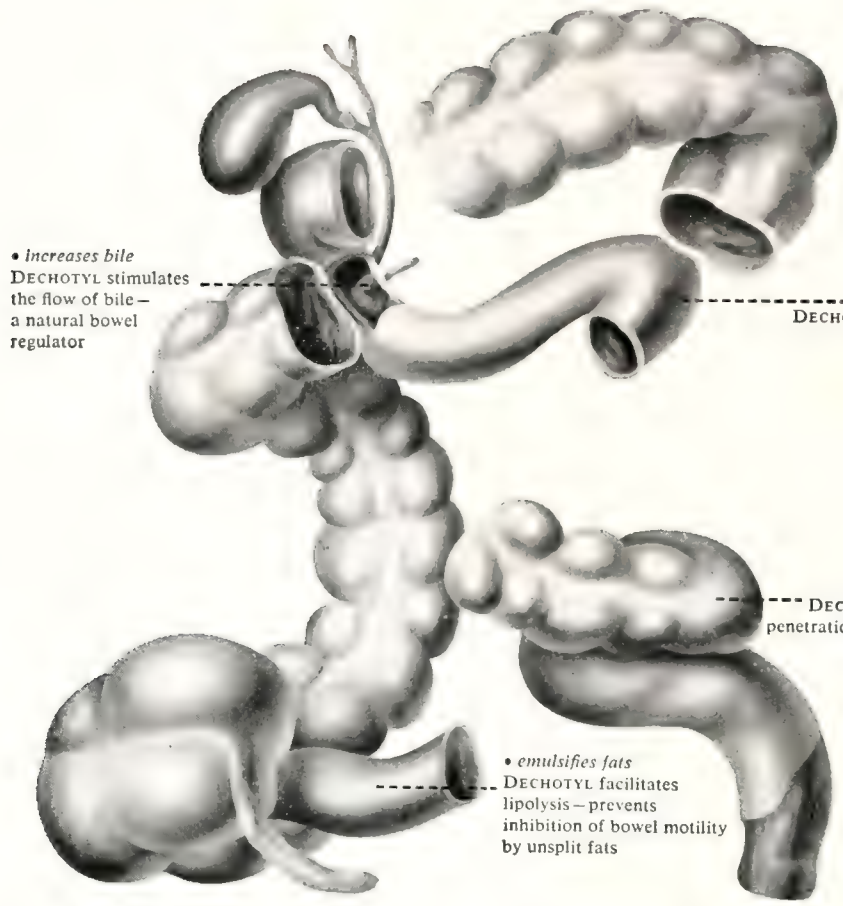
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Calurin®, calcium acetylsalicylate carbamide equivalent to aspirin 300 mg. This is the freely-soluble calcium aspirin that minimizes local irritation, chemical erosion, gastric damage. High, fast blood levels.

TAIN brings quick, symptomatic relief of the common cold (malaise, headache, muscular cramps, aches and pains) especially when susceptible organisms are likely to cause secondary infection. Usual adult dose is 2 Inlay-Tabs, q.i.d. In bottles of 50. ℞ only. Remember, to contain the bacteria-prone cold...TAIN.

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helps free your patient from both...
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TRABLETS*

well tolerated...gentle transition to normal bowel function



Recommended to help convert the patient—naturally and gradually—to healthy bowel habits. Regimens of one week or more are suggested to assure maintenance of normal rhythm and to avoid the repetition of either laxative abuse or constipation.

Average adult dose: Two TRABLETS at bedtime as needed or as directed by a physician. *Action usually is gradual, and some patients may need 1 or 2* TRABLETS *3 or 4 times daily.*

Contraindications: Biliary tract obstruction; acute hepatitis.

DECHOTYL TRABLETS provide 200 mg. DECHOLIN,® (dehydrocholic acid, AMES), 50 mg. desoxycholic acid, and 50 mg. dioctyl sodium sulfosuccinate, in each trapezoid-shaped, yellow TRABLET. Bottles of 100.

*AMES T.M. for trapezoid-shaped tablet.

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"Sometimes, when I have a running nose, I'd like to clear it with TRIAMINIC® just to check out that systemic absorption business.

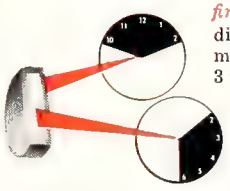
Reaches all nasal and paranasal membranes, huh?"

...and for humans with RUNNING NOSES...

You can't reach the entire nasal and paranasal mucosa by putting medication in a man's nostrils — any more than you could by trying to pour it down an elephant's trunk. TRIAMINIC, by contrast, reaches *all* respiratory membranes *systemically* to provide more effective, longer-lasting relief. And TRIAMINIC avoids topical medication hazards such as ciliary inhibition, rebound congestion, and "nose drop addiction."

Indications: nasal and paranasal congestion, sinusitis, postnasal drip, upper respiratory allergy.

Relief is prompt and prolonged because of this special timed-release action:



first — the outer layer dissolves within minutes to produce 3 to 4 hours of relief

then — the core disintegrates to give 3 to 4 *more* hours of relief

Each Triaminic timed-release Tablet provides:

Phenylpropanolamine HCl	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

Dosage: 1 tablet in the morning, midafternoon and at bedtime. In postnasal drip, 1 tablet at bedtime is usually sufficient.

Each timed-release Triaminic Juvelet® provides:
½ the formulation of the Triaminic Tablet.
Dosage: 1 Juvelet in the morning, midafternoon and at bedtime.

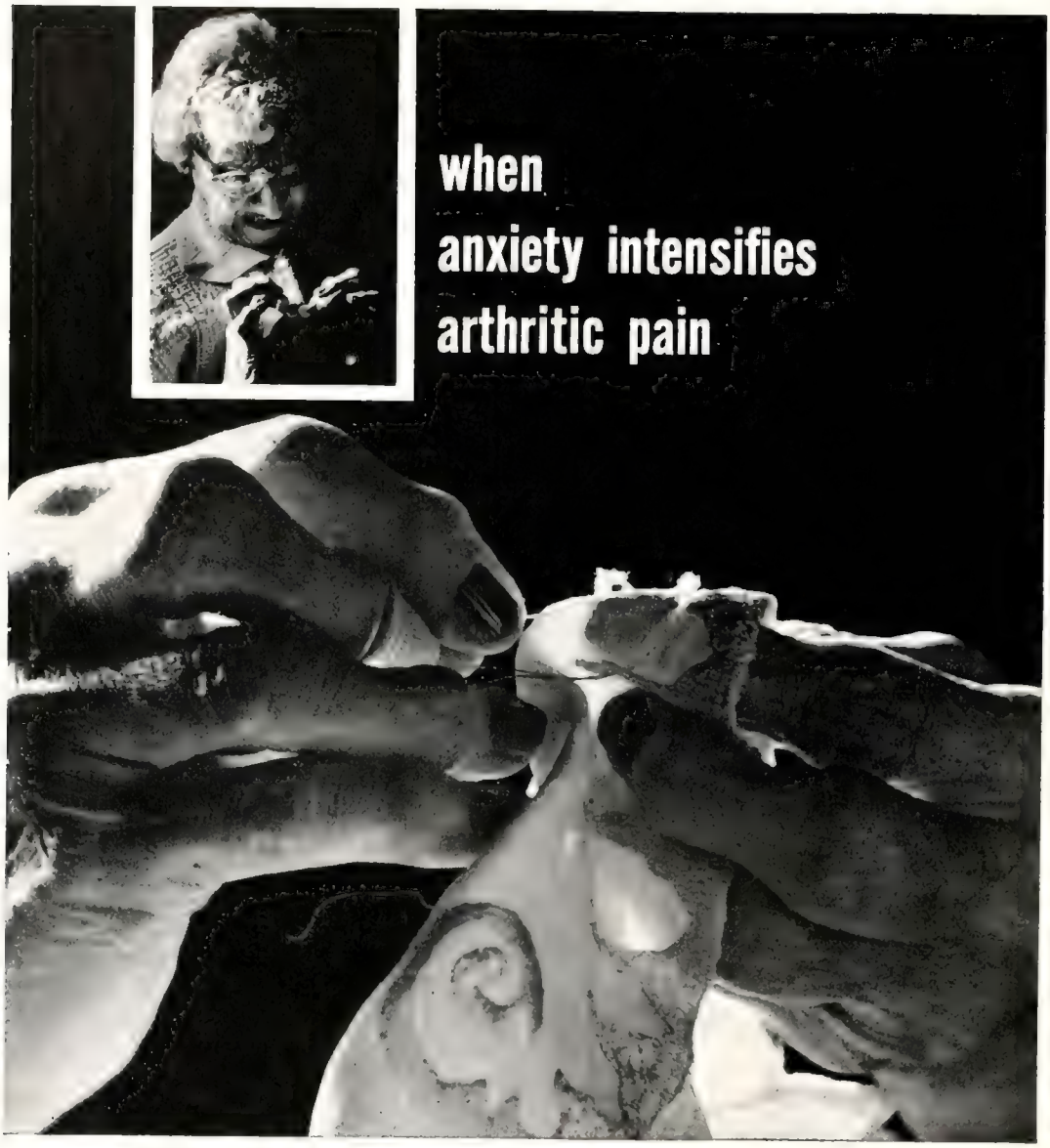
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¼ the formulation of the Triaminic Tablet.
Dosage (to be administered every 3 or 4 hours):
Adults — 1 or 2 tsp.; *Children 6 to 12* — 1 tsp.;
Children 1 to 6 — ½ tsp.; *Children under 1* — ¼ tsp.

TRIAMINIC®

timed-release tablets, juvelets, and syrup

STOP *running noses* *and open stuffed noses orally*

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. . . DARVO-TRAN™ relieves pain more effectively than the analgesic components alone

Effective analgesia *plus* safe relief of mild anxiety helps combat the pain-anxiety spiral. In Darvo-Tran, the tranquilizing properties of Ultran® are added to the established analgesic effects of Darvon® and the anti-inflammatory benefits of A.S.A.®. Clinical and pharmacologic studies have shown that when pain is accompanied by anxiety, the addition of Ultran *enhances* and *prolongs* the analgesic effects of Darvon.

Each Pulvule® Darvo-Tran provides:

Darvon	32 mg.	TO RAISE PAIN THRESHOLD
A.S.A.	325 mg.	TO REDUCE INFLAMMATION
Ultran	150 mg.	TO RELIEVE ANXIETY

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Problems of Adjustment of Gifted Children

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Why should we concern ourselves with the adjustment problem of gifted children? Smart as they are, can't they take care of themselves? I am glad to say that the vast majority do turn out all right, and their superior mental capacity does seem to be a help in their adjustment to the critical problems of growing up, and in meeting unusual life situations. Nevertheless, they do not lack for problems. They are no more immune to the everyday problems of growing up than to measles and mumps. Entirely apart from causing unhappiness, serious emotional problems can cripple the progress, efficiency, and productiveness of a gifted child just as surely as can poverty, lack of opportunity, or shortsighted, unsympathetic educational management. In some cases, the effects can be even more devastating.

Changing Attitudes

In centuries past, youngsters of unusual talent were regarded with a kind of superstitious awe; when they were recognized, people did the best they could for them, such as putting them under the patronage of a wealthy or powerful person, where they could be appropriately educated, and might eventually continue in the service of the patron, as sort of scholastic artisans. There is no telling how many were lost from lack of recognition, or were held down by the rigid social structure. In any case, very little notice was paid to adjustment problems. Those who were ambitious and could make the grade did well; others fell by the wayside and were forgotten.

Around 1850, before the dawn of modern psychology, people came to believe that genius and insanity were closely linked. Also, if you were an artist or a literary man, it was quite fashionable to have tuberculosis. Lord Byron is said to have earnestly desired to be consumptive, like some of his famous colleagues. This seems ridiculous, but there may have been a grain of sense in it. In poetic and other artistic endeavors, where imagery and creative imagination are at a premium, the changing moods of depression and elation were perhaps useful to some; and fever, like alcohol, served to release the imagination from humdrum, everyday thought patterns. It may be that ways of thinking were so rigidly stereotyped in those days that the only way for some people to break the chains was to be a little mad or a little sick.

Unfortunately, however, this attitude led to the notion that men of genius were abnormal, unstable, and headed for insanity or deterioration. This in turn led to a fear that precocity would be disastrous to a child, so that parents of gifted children were careful to protect them from stimulation, and discouraged them from manifesting early cleverness. An altogether unfounded myth was circulated that many great geniuses were dunces in childhood. Perhaps we should be charitable with the authors of all this nonsense, and those who accepted it. Fear and jealousy are powerful emotions, and not too long before, eccentrics were burned at the stake as witches. Only Francis Galon managed to s t e e r clear of this romantic emotionalism, and took the trouble to study objectively the lives of famous men, thus setting the stage for scientific research as an alternative to misty speculation.

Objective Studies

The first studies, like those of Galton, were mostly retrospective appraisals of

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people who had already achieved eminence. One reason why difficulties seem to occur quite often among famous men, is that famous men are the ones who have biographies written, while commonplace people do not. We also know of child prodigies who have "burned out" young, become mentally ill, or rebelliously refused to use their talents constructively. But eminent success is a lopsided basis on which to select subjects for research, and the study of notable failures certainly does not give a valid idea of what average people or "average" geniuses are like.

With the development of psychologic tests and measurements in the latter part of the nineteenth century, and the Binet-Simon Scale for Children in 1905, it became possible to identify gifted people in *childhood*, to observe them on the spot, so to speak, and to follow them forward, to see what became of them. Nearly 40 years ago Lewis M. Terman and his co-workers began their monumental work of studying and following more than a thousand gifted children. Their study has the tremendous advantage of having selected its subjects from a large and presumably normal or average school population. All the children they could locate with an intelligence quotient of 140 or over were included. This is about 1 per cent of the total population.

To get a completely representative sample of a thousand, it would have been necessary to administer 100,000 intelligence tests, and this was of course not possible. Instead, the children were identified within a group of more workable size, in which individuals were nominated by their teachers as the brightest or the youngest in the class. Interestingly enough, there was a higher proportion of eligible children among those nominated because they were young than among those who had impressed the teachers as being most intelligent. The important point is that most of these children were not at the time exceedingly remarkable, as would have been the case if only children of outstanding achievement had been selected.

In the initial study, a large group of children of average intelligence were similarly investigated, for comparison. Studies of single individuals give us insight into the lives of those particular individuals, but it is only by studying well selected groups that we can reliably draw general conclusions and make predictions about other individuals or groups. In my opinion, this sort of study provides an adequate basis on which to make valid judgments about what gifted children are actually like, and to find out, in a scientifically meaningful way, what becomes of them.

Characteristics of the Gifted Child

Popular notion

What is a gifted child really like? When a cartoonist wishes to portray such a child, he generally draws a picture of a small, spindly boy with a bulging forehead, scowling behind heavy-rimmed glasses, and carrying a stack of learned books. The boy may be looking at a butterfly with a magnifying glass or operating an impressive and rather menacing collection of scientific apparatus. If he is talking, he uses large, unnecessarily complicated words, and displays a haughty, snobbish and scornful attitude toward other children and adults. The "girl genius" is shown as less malicious, but no less unattractive — dowdy and unfeminine, aggressively impertinent, or else alone in the recesses of a library, wearing even bigger and more repulsive glasses than the boy.

I hope I need not tell you that very few children are like this caricature, and those few are probably pretty sick. But there is always a good deal of hidden truth in humor, and although this picture is an incredible distortion of what the average gifted child is really like, I think it does accurately portray some quite common fears and fantasies which *adults* have about gifted children. Confronted with the average gifted child, who is healthy, happy, and pretty easy to get along with, this caricature is quickly found to be as unrealistic as the old-fashioned melodrama villain, with his top hat, large chin and long black mustache. But I think that a great many parents do have a lurking fear that they might be dealing with a monster, a misshapen, sickly, sexually distorted, priggish and downright nasty individual, mischievous and vengeful, and possessing frightening intellectual powers with which to carry out his devilish schemes. It is apparent that superstitious awe did not entirely die out in the Middle Ages, and that there is plenty of need, even in this era of enlightenment, to let people know what gifted children are *actually* like.

Terman studies

The initial Terman study showed that, compared to a similar group of average children, their gifted subjects were healthier and more robust, were in general better adjusted as individuals, and were equally popular socially. They were a good deal more interested in reading, on a wide variety of subjects, and did in fact spend more time alone than the average, and less in groups. However, their social maturity was at least as good as average, despite the fact that they were younger than their associates; and, although they spent less time actually playing group games, they were *familiar* with more different kinds of children's games than the group to which they were compared. Although they were of course way ahead in school performance, they were less adept than their peers in penmanship and shopwork, perhaps because their interest in intellectual skills and abstract problems far outweighed their motivation to perfect manual skills. In routine scholastic exerises like a simple arithmetic drill, their performance was not up to their over-all capacity; gifted children have little need of repetitive practice once they have clearly understood the general principle, and they find this sort of thing tedious and boring.

Incidence of maladjustment

Adjustment is a tricky thing to assess, because nobody can agree on just what good adjustment is. From my point of view as a child psychiatrist, the Terman studies are handicapped by the lack of formal psychiatric appraisal. However, there is pretty general agreement on many items of poor adjustment, and I think it fair to say, from the long-term follow-ups, that the record of adjustment of gifted children is at least as good as that of the average population, and probably a good deal better. After 18 years, 80 per cent of those responding to questionnaires rated themselves as having satisfactory general adjustment. Fifteen per cent had had some difficulties, and 4 per cent had had serious difficulties at some time. One per cent had been psychotic at some time. Five of the men and 2 women had committed suicide. Eleven men and 6 women were homosexual. Three of the boys had been to reform school, but had made out all right afterward. One man as an adult was in prison for forgery. Four or 5 women had had illegitimate children.

The foregoing figures give an idea of the incidence of some of the more important difficulties, which in my opinion is remarkably low. The men tended to marry earlier than average, and the women later, but by 1946 more of both were married than in an average population. The divorce rate was about average. On the positive side, of course, the record of achievement is most impressive, but cannot be outlined here. Thus I think it is fair to say that the endowments which lead to superior scholastic achievement also lead to adequate personal and social adjustment, and although difficulties do arise, they are no more common than among average people. There is evidence that when gifted people do have emotional difficulties, they are able to resolve them to an unusual degree. In the Terman study, all the notable failures seemed to come from seriously disturbed home environments.

Types of Problems Encountered

What actual difficulties do occur? The symptoms are not much different from those of ordinary children. Common manifestations are anxiety, poor school work, nailbiting, bedwetting, nightmares, excessive daydreaming, social withdrawal, fearfulness and actual phobias, and various behavioral disturbances such as undue aggressiveness, temper tantrums, stubbornness, rebelliousness, mannerisms, and ritualistic behavior. Because of their special abilities, such children when disturbed may also exhibit behavior which is uncommon in average children. If they have a strong need for attention, they are able to dominate the center of the stage with witty and clever remarks. They may be smart-alecky and verbally aggressive, rather than physically aggressive. It is easy enough for us to see that fearfulness indicates emotional distress. It may be a little more difficult to understand that a nagging, bossy, obnoxious child may also be unhappy and in need of help.

Contributing factors

What lies behind these symptoms? Although it would be tempting to say that jealousy and lack of understanding on the

part of associates, the school, and the community as a whole is the principal cause of maladjustment in these children, it is safer to suppose that the root of the difficulty is within the home. Certainly bullying, teasing and antagonistic attitudes on the part of less gifted peers or teachers may at times give rise to quite justified anger, unhappiness, and frustration. The ups and downs of social existence however, are far less important to children, particularly young children, than attitudes and relationships within the family. Being a parent is a pretty taxing job under the best of circumstances, and people with fairly serious neurotic or personality problems of their own may find it very difficult to meet the emotional needs of their children. In some cases, parents wish their gifted children to make up for some of their own failures in life, and this may lead to quite unreasonable demands for maturity and scholastic success. When a child is able to talk and think like an adult, it is all too easy to expect him to have the feelings and stability of an adult, and to be surprised or angry when he behaves childishly. In addition, illness, birth of siblings, sickness or death within the family, and general human misfortunes are problems which must at times be dealt with, and which obviously put some strain on the youngster's adaptive capacities. All these things may be reflected in disturbances of behavior or performance. In addition, virtually all children manifest some form of rebellion during adolescence, which may result in poor school or social performance, or general uncooperativeness.

I will give some examples of parent-child problems from a child guidance clinic in Boston. These gifted children were brought to the clinic because they were antagonistic, or seclusive and shy, or doing poorly in school. In 7 cases the parents gratified their own vanity by boasting about the child, without much regard to his own needs; they regarded the children as extensions of themselves, not as individuals in their own right. In 11 cases the children were pushed and overstimulated; this is the sort of thing which you sometimes see with child prodigies, where the child's powers are being exploited for social or financial gain. Fifteen parents were possessive and overprotective, which led to an excessively close relationship between parent and child, to the detriment of normal social relationships. In 7 cases the parents were afraid of the child's power to outwit and control them, so that they gave in and let the child "rule the roost." In 7 other cases, perhaps also motivated by fear, the parents attempted forcible repression of the child's precocity, which led to mutiny, conflict, and antagonism.

Special Problems of the Gifted Child

The problems I have described can occur with any children, including gifted ones. But what are the special problems or dangers to which the gifted child is exposed? Given a reasonably favorable home environment and reasonably mature parents (and this is generally the case), exploitation, fear, and hostility from the family are not too likely to occur. Excessive expectation is probably the trap into which parents and teachers fall most easily. The more consistently a person performs, the more logical it is to assume that he will always perform consistently. Slumps and doldrums should be accepted sympathetically, but when they come as a surprise, may be met with anger or alarm. There is also a danger that a bright child may use his intellectual talents to compensate for certain deficiencies of personality, thus sidestepping the problem instead of facing and resolving it.

In a small school a gifted child may lack adequate competition, a situation which not only permits slipshod working habits and a general lackadaisical attitude towards formal learning, but also robs him of early contact with the experience of being second best. I do not subscribe to the view that bright children should be "put in their place" or "taken down a peg," but when they reach college many are quite dismayed to face, for the first time, the fact that there are others who can do quite a bit better. I need hardly mention the problem of a bright child who is bored in school because so much of the work is too simple for him. I might mention that in the Terman study, most of the children were two grades ahead of their age mates, but were actually capable of doing work two grades higher still.

This brings us to the most unique problem of the gifted child, the fact that scholastic advancement inevitably produces some so-

cial dislocation. I feel personally that it is probably unwise for a 12 year old to enter college. It would be equally absurd to force a socially mature gifted child to wait until he was 17. But I cannot readily say where the line should be drawn, and I think this can only be decided by carefully considering the merits of the individual case. The Terman studies show that it is perfectly possible for a child to operate happily and successfully, even though he is 4 years younger than his classmates. Certainly an entirely satisfactory adjustment has been made in many cases, although I think it is obvious that an emotionally immature child, or one with more than average adjustment problems, could get into a lot of trouble, with regard to his personality formation. As the youngest in the class, he finds it easy to maintain a babyish way of relating to people, especially if growing up seems like a pretty hard job anyway. Certainly these unusually young children, like children whose physical growth has been retarded through disease, are often subjected to a lot of babying from their classmates. A teacher can help by applying some restraint to the enthusiasm of the "little mothers" who want to make a baby or a pet out of such a youngster.

The highly gifted

I should like to say a few words about the problems of the most highly gifted children, although I have little comfort or advice to offer. Children with intelligent quotients of 180 or above are as much advanced above the "ordinary" gifted child as the latter is above the average. These people are exceedingly rare, perhaps 1 in 4000. Although they do not get into obvious or serious difficulties, it is hard for more ordinary people to understand them, and they do have genuine problems in social adjustment. They do not, however, demonstrate antisocial behavior. In childhood, the problem seems to stem from the divergence of their interests from those of their agemates, and they literally do not "speak the same language." They tend to develop adult-sized speaking vocabularies very young, and it may require considerable effort for them to keep their language within limits which can be understood by their friends. Society often seems less interesting to them than books, so that they tend to be solitary, though not necessarily lonely. Perhaps the real difficulty is that they must learn to understand and tolerate the slower mental processes of ordinary children and adults.

I think their most serious handicap is the lack of companionship of people like themselves. One way to understand yourself is to get to know somebody who thinks the way you do, and these unusually gifted children certainly do not commonly have this opportunity. This is perhaps the best argument in favor of sending them to special schools, where a number of them can get together to experience more normal peer relationships. At the same time, of course, there is an enormous need for basic research in this area, so that the less gifted but more numerous people, such as ourselves, may humbly learn how to help these remarkable children to fulfill the potential of their priceless gifts, for themselves and for humanity.

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A Follow-Up Study of Premature Infants Born in Wake County, 1948-1951

A Preliminary Report

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This report concerns a study of premature infants born in Wake County between October 1, 1948, and October 31, 1951, as compared with a control group of full-term infants (group 1). The premature infants were divided into two groups (2 and 3). Group 2 included those not cared for under the premature infant program, and group 3 consisted of those who were cared for under the program. The infants in group 1 were matched by birth certificates with certain factors of the two groups of premature infants. In making final comparisons, groups 2 and 3 were combined. There were two reasons for this combination: (1) because we had failed to take into consideration the number of children in all groups who had expired; and (2) so that we could more easily appraise the differences between the full-term and premature groups. This made slight differences in matching characteristics, which will be referred to later. There were 92 full-term and 137 premature infants in the final comparisons.

Objective and History

In the beginning the object of the study was to compare the growth and development of premature and full-term infants who were Wake County residents.

In 1948 the North Carolina State Board of Health established seven centers for the care of premature infants over the state. Those born in Wake County who came under the premature program were cared for either at Rex Hospital in Raleigh, or at Watts or Duke Hospitals in Durham. Some of these children are no longer in the county, but some of them were easily traced. The idea for a follow-up study originated in the State Board of Health. Consultants in the Maternal and Child Health Section there visited the Wake County Health Department, and together they laid plans for the study.

Beginning in the fall of 1957, a pilot study was made by the Nursing Division of the Wake County Health Department. One hundred thirty-seven families who had had premature infants cared for under the program were visited by the public health nurses. One and in some instances both parents were interviewed concerning the child's development, and teachers were consulted regarding his progress and emotional adjustment in school.

It was found from this superficial observation that 46, or 33.6 per cent of the children had a "defect."* This figure does not include the additional number who moved from the state and from whom we had histories of previous defects, or those who died in premature centers. On the basis of this finding, the Maternal and Child Health Section of the State Board of Health and the Wake County Health Department decided to institute a major study, with professional assistance and a comparable control group.

Organization of Committee

A committee to formulate objectives, select the sample, and set policies and procedures was organized. It consisted of the following consultants from the State Board of Health: Dr. A. H. Elliot, director of the Personal Health Division; Dr. Charles Williams, pediatrician; Dr. James Donnelly, obstetrician; Miss Rebecca Swindell, maternal and child health nurse; Miss Eileen Kiernan, pediatric nurse; Dr. Ralph McGill, psychologist; Miss Katherine Barrier, medical social worker; Mr. James R. Abernathy, biostatistician.

Representing the Wake County Health Department were Dr. Isa C. Grant, health director, and Miss Flora Wakefield, chief supervising nurse.

From the Wake County Health Department, Raleigh, North Carolina.
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*Defined as any major deviation from normal as observed by untrained personnel.

Representing the University of North Carolina School of Public Health were Dr. Sidney Chipman, professor of maternal and child health; Dr. Ellen Preston, and Dr. James Rhyne, two pediatricians who were students in Dr. Chipman's department; and Dr. Bradley Wells, professor of biostatistics.

This committee met over a period of several months. Between meetings, various subcommittees and experts reviewed segments of the proposed plan.

The final plan worked out by this group follows:

Selection of Sample

The original group of Wake County residents born prematurely in Wake County between October 1, 1948, and October 31, 1951, and two comparable control groups were selected for study. The control groups were to consist of other Wake County residents born in the county in this same period: those of mature birth weight and those weighing less than 2,500 Gm (5½ pounds or less) at birth but not cared for under the program. Insofar as possible the control groups were selected in such a manner that they matched the original group with respect to the following factors recorded on the birth certificate listed in order of priority: (1) single or plural birth; (2) birth weight according to 500-Gm. intervals; (3) race; (4) sex; (5) place of birth; (6) occupation of father; (7) legitimacy; (8) age of mother; (9) total number of deliveries including present birth; and (10) attendant at birth.

The three groups of children totaled 423. Group 1 (controls) were numbered 1-141; group 2 (premature infants not aided by the program), 142-282; group 3 (premature infants who received care under the program), 283-423.

Method

After the sample was selected by the Statistical Section of the State Health Department, letters were written by the Director of Personal Health, Dr. A. H. Elliot, to parents of the 423 children involved in the study. It was explained that their children had been chosen for careful examination and study within the next three or four months. They were told that they could consult their family doctor or pediatrician for any help or explanation desired. (The Wake County Medical Society received details of the plan prior to its inception and voted full approval). Parents were also told that the public health nurse would visit them in the next few weeks, to explain the objectives of the study and request their cooperation. On arrival the nurse explained what examinations the children would have and obtained consent for a review of the medical history of the mother prior to delivery and that of the child up to the time of the study. Most of the parents indicated their willingness to participate in the study.

The following studies were attempted on each child: Review of the hospital record of mother and baby by obstetrician or nurse; review of the interval history obtained from the public health nurse interview (this included records of prenatal deliveries and postpartum care of the mother obtained from private physicians and hospitals, and birth data, newborn care, and subsequent medical or hospital care of the children); a complete physical examination and medical history by two pediatricians from the University of North Carolina School of Public Health (including visual acuity, ophthalmoscopic, audiometric, and neurologic studies); routine laboratory screening by a registered technician (including hemoglobin determination, white blood cell count and differential, sickle cell preparation, urinalysis, test for phenylketonuria, and serologic test for syphilis, with special consultations with the University of North Carolina Out-Patient Department as indicated; psychologic testing by a competent psychologist using the revised Stanford-Binet Intelligence scale and the Draw-A-Man test; an evaluation by teacher of the child's school performance as well as his behavioral aberrations and results of previous psychologic testing; evaluation by an experienced social worker of the socioeconomic status of the family and the emotional growth and development of the child.

Results

Final studies and comparisons were made on 92 mature infants and 137 premature infants. Ninety-two infants had died; 74 had moved away, and 21 refused to have the follow-up studies. Among the families we were able to locate, we were fortunate to have only 21 refusals, thanks to the excellent "selling" job done by our public health nurses.

Mortality

Table 1 shows the number of deaths. Six of the full-term infants had died. Of the

Table 1

Deaths Among Premature and Control Groups by Birth Weight and Age At Death

Age at Death	Group 1 Full-term Infants Weight (Grams)					Group 2 Premature Infants Not on Program Weight (Grams)					Group 3 Premature Infants On Program Weight (Grams)				
	Total	Under 1000	1001-1500	1501-2500	2501 or more	Total	Under 1000	1001-1500	1501-2500	2501 or more	Total	Under 1000	1001-1500	1501-2500	2501 or more
Less than 1 day	1	—	—	—	1	28	4	14	10	—	1	—	—	1	—
1 day	—	—	—	—	—	12	2	6	4	—	6	5	—	1	—
2-6 days	—	—	—	—	—	11	4	7	—	—	3	1	—	2	—
7-27 days	—	—	—	—	—	2	—	—	2	—	2	—	—	2	—
28 days 11 mos.	5	—	—	—	5	7	—	—	7	—	9	2	—	7	—
More than 1 year	—	—	—	—	—	2	—	1	1	—	3	—	1	2	—
Totals	6	—	—	—	6	62	10	28	24		24	8	1	15	—

premature infants who were not on the program (group 2), 62 had died, all but 2 before reaching 1 month of age. Twenty-four premature infants on the program (group 3) had died, all but 2 of these deaths also occurring in the first month of life.

We are thus aware that the mortality is very high in the first month of life. Many of these infants did not live long enough to be served by the program—another obvious reason for combining the premature groups. Table 1 also shows that in the smaller infants mortality was much higher. Since we do not have a birth weights of all the infants studied, we would like to point out that of the total number of 137 premature infants, 33 (about 25 per cent) weighed less than 1,500 Gm. The remainder weighed between 1,500 and 2,500 Gm.

Physical defects

Table 2 shows the total number of defects in the premature and mature infant groups. Among the 229 infants studied there were 16 major defects and 28 minor defects. (Major defects were defined as any defect that interferred greatly with the normal function of the individual). While the proportion of children with defects was greater in the premature group, this difference is not statistically significant.

As you will note from this table, there were 4 blind children among the prematures. All of these had retrolental fibroplasia. Among the mental defectives in this group, 2 were cerebral spastic. Final medical histories are still to be done on some damaged children and may affect the final tabulation.

Table 2

Types of Defects

Defects	Total	Premature	Full-term
Total	229	137	92
One or more major	16	13	3
No major; one or more minor	28	20	8
Accessory only	92	54	38
None	93	50	43

Table 3, showing a breakdown of major and minor defects by weight, discloses a concentration of major defects in children weighing less than 1,500 Gm. at birth. This finding is even more important since these children comprise only about one fourth of the premature infants studied.

Comparisons of the mean height, weight, and head circumference of children in the premature and full-term groups showed that the latter held a slight advantage in each factor. In height, the difference was found to be approximately 2 cm.; in weight, from 7 to 8 pounds; and in head circumference, about 1.5 to 2 cm. These differences are significant when adjusted for the age of the child.

Social studies

Social studies of all children in both groups were made, using the Warner Index standard. The I.Q. follows the usual pattern of decreasing with social class in both groups. Except for children in social class III, the prematures tested at a lower level. Persons skilled in this field will interpret the data at a later date.

Comment

We believe that the number of cases included in this study is not sufficient to justify drawing any definite conclusions. In searching the literature, we could find no comparable study extending over an equal period of time. Some special work has been by Dr. Margaret Dann of the New York

Table 3

Analysis of Defects According to Birth Weight

Defects	Total	Total Premature	Birth Weight in Grams 500-1000	1001-1500	1501-2000	2001-2500	2501 and over
Total	229	137	1	32	61	43	92
One or more major defects	16	13	1	9	2	1	3
Blindness	4	4	—	4	—	—	—
Impaired hearing	2	1	—	—	1	—	1
Stammering and stuttering	1	1	1	—	—	—	—
Refractive errors, microcephaly	1	1	—	1	—	—	—
Mental deficiency, severe	6	5	—	4	1	—	1
Malformation circulatory system, bone and joint	1	1	—	—	—	1	—
Impaired vision, clubfoot	1	—	—	—	—	—	1
No major, one or more minor defects	28	20	—	5	9	6	8
Borderline intelligence	4	2	—	—	1	1	2
Refractive errors	15	11	—	4	5	2	4
Partial blindness	1	1	—	—	—	1	—
Heart disease	1	1	—	—	1	—	—
Asthma, malnutrition	1	—	—	—	—	—	1
Congenital heart	1	—	—	—	—	—	1
Speech impediment	1	1	—	—	—	1	—
Malnutrition, undescended testicles	1	1	—	—	1	—	—
Refractive errors, borderline intelligence	1	1	—	—	—	1	—
Borderline intelligence, undescended testicle	1	1	—	—	1	—	—
Malnutrition, allergic disorder	1	1	—	1	—	—	—
Accessory only	92	54	—	8	30	16	38
None	93	50	—	10	20	20	43

Hospital — Cornell Medical Center, who studied only babies weighing less than 1,500 Gm. at birth who survived. Dr. Hilda Knoblock of Johns Hopkins and Dr. Cecil Drellen of England also made studies of babies who had quite low birth weights.

Our data need further evaluation and analysis. We wish, however, to suggest three possible implications of the statistics obtained in this study.

1. Mortality among infants born prematurely is high. All possible measures for reducing it should be undertaken.
2. Differences between the mature and premature groups may change when adjustments for factors such as age, race, and sex of infant are made.
3. While most of the differences between our premature and mature groups were not significant, major defects were found to be concentrated in the low-weight categories.

Summary

The birth certificates of 141 full-term infants were matched with those of two groups totaling 282 premature infants. Studies of this group showed the usual high mortality in the neonatal period. After excluding those who had died or moved away, records of 92 full-term and 137 premature infants were compared. Major defects were greater in the premature group. These children were significantly smaller in height, weight, and head circumference. The child born prematurely also had a slightly lower I.Q. as related to social class. These differences were not considered significant, but, since they are consistently favorable to the full-term infant, they are worthy of note.

It is too early to evaluate this study. In our department it did stimulate interest in the premature infant and consideration of planned studies in the future. It is through controlled studies such as this that health departments can eventually help the practicing physician to make the best use of his training and experience.

Note: This study was financed through an increase in funds from the Children's Bureau of the Department of Health, Education and Welfare, which stipulated that a study in maternal and child health be undertaken in North Carolina.

The authors are especially indebted to Mr. James R. Abernathy, of the Statistical Division of the State Board of Health, and Dr. Bradley Wells, in the School of Public Health, who prepared the statistics and graphs cited in this paper.

The Problem of Psychosis Among Felons In the North Carolina Prison System

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and
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CHAPEL HILL

As part of a study of the emotional problems of inmates of North Carolina prisons, a team of psychiatrists, psychologists, and sociologists from the University of North Carolina investigated the incidence, course, and management of psychosis in a sample of the 7,000 felons in the correctional system.

The study, requested by the Prison Department, was accomplished between July, 1957, and July, 1958. The term "psychosis," as used in the study, refers to disorganization of the personality and loss of ability to evaluate and test reality. Psychotic individuals are also unable to relate themselves adequately to their work or to other people. "Borderline," as used in this study, refers to the presence of sufficient evidence of psychosis to warrant immediate study in a hospital situation.

Psychotic inmates may be transferred to special units of the state hospital system. At the time of the study, 50 white felons were in the Raleigh hospital, and about 25 Negro felons in the one at Goldsboro. During the year 75 per cent of the 52 admissions to Raleigh were re-admissions. In the two months when hospital admissions were most closely surveyed, 4 men were re-admitted who had been discharged within the previous week. Although free from psychosis when they left the hospital, they experienced exacerbations almost immediately on their return to prison.

Material

The prison authorities requested the examination of a group of 31 felons considered too disturbed emotionally to fit into prison life. These men were too unstable for employment on the roads, and too inefficient and unreliable for industrial jobs within Central Prison. If allowed to mix with the general prison population, they provoked violence or were otherwise victimized. Many of these men were not hospitalized, but were kept in prison only after repeated trips to and from the hospital had demonstrated that their troubles promptly recurred in prison after hospital treatment. The entire 31 were studied; 21 were psychotic and 8 were borderline.

A sample of the 105 men who were having the most difficulty adapting to prison life although not considered by the authorities to be mentally ill, was also studied. These men fought each other, insulted and assaulted the guards, broke rules, and repeatedly attempted escape. Forty-one per cent of a sample of these men were psychotic and 35 per cent borderline, indicating that the 105 men in the category could be expected to include 43 psychotic and 37 borderline individuals. To non-medical personnel their behavior was evidence of defiance; to physicians, their conduct, ideation, and affect were evidence of psychosis. The Prison Department suspected the existence of the problem but lacked sufficient diagnostic facilities to evaluate it.

From these studies 64 psychotic and 45 borderline felons could be reliably predicted to be within the prison system. The diagnosis and treatment of psychosis is a medical problem. These men were sick people, in the custody of the state, who were not receiving adequate treatment. They do not include men who were psychotic but who managed to "get by" in prison, nor do they include those imprisoned for misdemeanors rather than felonies who become psychotic. As their psychoses may be expressed by criminal acts after discharge, it would be in the public interest to detect, diagnose, and treat these men during their imprisonment.

There is no simple answer to the problem of psychosis in prisoners. Increased diagnostic and hospital facilities would be

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of value but would not solve the problem. The 75 per cent rate of re-admissions to the Raleigh unit demonstrates this fact. Abstracts from prison records and hospital charts illustrate the problem.

Case 1

Patient O was admitted four times and hospitalized for a total of 10 months in an 18-month period.

On his first admission, January 22, 1957, he said, "I was in a room with a bunch of goats .... Someone kept telling me to leave." There were self-inflicted wounds on his arms and shoulders. By the end of February he could not account for his scars, but doubted that he had injured himself. Late in March he was conducting himself normally, and was discharged to prison on April 1, 1957.

In prison, immediately prior to his re-admission on October 2, 1957, he stared at the ceiling and said, "The roof is falling down." After a few weeks in the hospital he stated that he had thought, in error, that everyone in prison was picking on him and that he was "going to pieces." He was discharged on February 2. In prison he became detached, frantic, and slashed his arms. On February 28, 1958, he was readmitted to the hospital where he again improved rapidly. He recalled having had hallucinations and delusions, and became cooperative and friendly. He became depressed in March, but recovered in April and was returned to prison July 1, 1958. Seven days later he was admitted for the fourth time.

Case 2

Patient P was admitted five times and hospitalized for 22 months in a 30-month period.

Prior to his first admission on September 15, 1955, he had been in a panic. He ran about with a Bible in his hands, insisted on speaking with people outside the camp, and refused to converse with the guards or the camp physicians. He had hallucinations of his mother, and was depressed and negativistic. In October he was cooperative but still slightly depressed. He was discharged to prison on February 14, 1956, and re-admitted to the hospital 10 days later. At this time he was retarded, would not answer questions, and had auditory hallucinations. In March he was still antagonistic, and in July he was given Thorazine, with good effect. Improvement was considerable by October, and he was discharged on January 23, 1957.

He remained in prison until a third re-admission became necessary on December 3 of that year. Late in January he was given electroconvulsive therapy because of hallucinations and delusions. He improved rapidly and was discharged on February 22, 1958. In three days he was re-admitted, being out of contact and having self-inflicted wounds. In March, rational but still intermittently depressed, he stated that he had cut himself because he was unhappy. By the end of May he was better and was discharged on June 18, 1958, but was admitted for the fifth time 23 days later.

Case 3

Patient S was admitted twice and hospitalized all but two weeks of a 19-month period.

Prior to July 18, 1956, the date of his first admission, he was restless, noisy, untidy, uncooperative, and heard "voices" degrading him. He reported: "The voices tell me my brother is dead. I see eyes looking at me." Later that month, in the hospital, he said, "The devil tells me to do bad things ... I was in the gas chamber last night." He received electroconvulsive and then insulin coma therapy, and by January, 1958, was coherent although his affect was flat. He was discharged on January 31, 1958. On February 4, 1958, while in prison, he said, "Everyone is talking about me .... they're planning to kill me." He was re-admitted to the hospital four days later.

Comment

The reversibility of psychosis may be considered in an adaptive framework. Adaptation, the relation of an individual to his environment, depends on characteristics of both. Psychosis may be considered as either an extremely regressive form of adaptation or a failure of adaptation. Susceptibility to psychosis in any situation is variable and depends on the individual's heredity and previous experience. The data demonstrates that in many of these men psychosis is a function of the environment. Even when somatic therapy, in addition to hospitalization, was required to produce a remission, the improved adaptation could be maintained in the hospital but not in the prison.

Hospital vs. prison life

Essential differences in the management of hospitals and prisons are apparent when the two are visited. It is the object of the hospital to make the patient's life as pleasant as possible, and to cure him if possible. Prisons, on the other hand, go somewhat out of their way to make the life of the inmate unpleasant. Two factors present in prison but not in hospital life have been observed to precipitate psychosis in other situations. The prison produces a high degree of tension in inmates by provoking but proscribing the expression of anger; the hospital avoids this situation. Prisoners are also far more deprived than are patients

in terms of the number and quality of familiar stimuli and relations. Before examining these differences in detail, it is useful to study them in historical perspective.

Less than two centuries ago mental hospitals in their present forms were unknown. Insanity was not recognized as a medical problem. Those so afflicted were considered as less than human or as possessed by the devil, and were treated accordingly. Criminals were not punished with prison terms. Imprisonment might be used to coerce or detain individuals, but punishment consisted of death, torture, multilation, humiliation, banishment, fines, or loss of status.

There have since been far-reaching advances in the understanding and treatment of both mental patients and prisoners. The insane came to be recognized as sick people and insanity as a medical problem. Asylums became hospitals, trying to give the best possible patient care. Later, knowledge of psychodynamics gave deeper understanding of the nature of mental illness and increased the possibilities of treatment. Advances in somatic therapy and in the knowledge of how the hospital environment could be controlled to facilitate remissions have further transformed mental hospitals into facilities for the care and treatment of sick people.

There have been simultaneous changes in penology. Prison terms replaced brutal forms of retaliation. Prisons gradually have become more tolerable, as it became evident that severity produces anger rather than reform. Knowledge of individual psychodynamics and of social forces made it plain that the criminal was maladapted rather than essentially evil. Emphasis shifted from retaliation to rehabilitation. Prisoners, however, are still thought of as being bad as well as sick; they are punished as well as given treatment. This leads to the essential differences between hospitals and prisons.

Prison life is tense; activities are monotonous and regimented; discipline is strict; protest is not tolerated. The unreasonable justification for this severity is the hope that it will lead to penitence. Convicts more commonly respond by accepting the standards and practices of the "inmate culture." This consists of unverbalized anger and contempt for the authorities, and the undercover enjoyment of illicit gratifications such as alcohol, drugs, homosexuality, and gambling. A few men are openly defiant despite severe punishment. The occasional prison riots are another form of adaptation, as are hunger strikes and mass breaking of limbs. Still another is expression of the anger after discharge, since many convicts can restrain their aggressive or anti-social behavior only when directly under the eyes of authority.

Psychotic reactions of various types occur when other adaptive efforts fail. In paranoid phenomena, exemplified by delusions of persecution, the anger is managed by attributing it to the environment. In depression, characterized by feelings of worthlessness and attempts at self-injury or destruction, anger is directed against the self. In schizophrenia the integrity of the self is lost[1]. The hospital environment provokes less anger than does that of prisons, and is more tolerant of expression. This allows restitution at a nonpsychotic level, or at least does not precipitate new psychotic episodes.

Prisons and hospitals differ considerably in terms of the number and variety of available stimuli and interpersonal relations. Visiting privileges are broader and reception arrangements more comfortable in the hospital. Occupational therapy, dances, and parties are part of life on the ward but not of life on the cell block. Although both environments are overwhelmingly masculine, in the hospital nurses and female patients are frequently encountered. Inmates returned from the hospital to prison are routinely kept in segregation units where facilities for socializing with each other are more limited.

There is considerable evidence that the maintenance of psychic equilibrium depends on the continuous supply of familiar and gratifying stimuli. Lilly[3] has described how sailors and explorers, isolated by chance or intent from other human beings develop first an extensive and vivid fantasy life and ultimately hallucinations. He also discovered that a much shorter period in a dark silent immersion tank at body temperature, a situation in which not only the familiar senses but those of temperature and proprioception are absent, may quickly produce disorganization and hallucinations. It has also been observed[2,4] that some aliens, who were apparently well integrated in their homeland, develop paranoid psycho-

ses in the unfamiliar environment of their new country, a fact attributed to the absence of familiar stimuli, outlets, and relations. The prison as described has many attributes of an isolated or alien situation; familiar stimuli and relations are minimal. This may affect vulnerable individuals in such a way as to produce psychotic adaptations. In the more varied atmosphere of the hospital restitution may occur.

Conclusions

The diagnosis, treatment, and prevention of psychosis are medical problems and medical responsibilities. The present management of psychosis in prisons is not adequate; the Prison Department was aware of this fact when the present study was requested. Increasing the capacity of the State Hospital System to treat psychotic prisoners would be of some help but would not solve the problem; if more psychotics were treated to the point of remission and then returned to prison, re-admissions would soon exceed the present rate of 75 per cent. It is similarly impractical to keep convicts who have recovered from their psychoses in the hospital, as this would turn the hospitals into prisons.

The best solution would be to increase psychiatric facilities within the prison system. More personnel are required. Diagnosis requires expert knowledge; men that physicians would recognize as psychotic are seen by those not medically trained as "strange" or "bad." Medical attention could also help maintain remissions. Special units in which the punitive elements of planned frustration and deprivation are absent should also be established to care for the once psychotic and potentially psychotic. Security could be maintained in these facilities, and working assignments would not only be possible but desirable. Nothing of importance would be lost if these men, or even the entire prison population, were treated in this manner.

Punitive measures in prison are of doubtful value; they cause anger rather than penitence, and lead to forms of immediate adaptation that have unfortunate long-range results. They are of little deterrent value, as individuals committing crimes either do not expect to be apprehended or simply do not think that far ahead. Punitive measures do express the anger of society towards the offender. This is human, but as individuals mature they learn to temper the impulse to "get even" if in so doing they can better deal with a problem.

Our society is also maturing; capital punishment, where still imposed, is progressively infrequent; mutilation is long since extinct, corporal punishment is exceedingly rare. Working and living conditions in most prisons, including those of North Carolina, are much better than they were in the past.

The prison has more important functions than punishment. Detention of criminals gives society temporary protection from their activities. It also provides an opportunity to initiate treatment and rehabilitation. These functions are of value. There is no evidence that additional punitive measures do any good and much to suggest that they do harm. Relaxation of the prison atmosphere would not rehabilitate criminals in itself, but it would simplify internal management, diminish the incidence of unfortunate adaptative reactions, and probably facilitate rehabilitative efforts.

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Berylliosis, Bones, and Behavior

An Illustrative Case Report

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DURHAM

Berylliosis, a systemic disease developing after exposure by inhalation to any one of a number of beryllium salts, has been of clinical interest, in part, because of its extraordinary variability. We have recently had a patient in whom a number of features of this illness appeared to merit reporting. These features included the singularity of the exposure, the natural history of the illness, the development of renal lithiasis, and the circumstances accompanying the onset of symptoms after a four-year latent period following exposure.

Case Report

Present Illness

A 36 year old white male chemical engineer was first admitted to Duke Hospital for a renal evaluation. The patient had been in good health until he had scarlet fever at the age of 18. He was not hospitalized at that time, and recovered without sequelae. At the age of 19 he was told he had albuminuria, but he later entered the service. At the age of 24 he was exposed to beryllium carbide for six months (January to June, 1948) while engaged in a project to assay beryllium for potential use in the Atomic Energy Program.

Throughout this time and during the ensuing four years, the patient enjoyed excellent health. Roentgenograms taken in 1948, 1950, and February, 1952, were interpreted as being unremarkable (figures 1-3). In June, 1952, however, he first noted the onset of illness characterized by easy fatigability, dyspnea on exertion, anorexia, weight loss, and intermittent low grade fever. There was some nonproductive cough, but no chest pain. These symptoms persisted, and he became less able to work. Finally, after approximately six months of continued disability, he underwent a thorough evaluation. X-ray studies revealed progressive pulmonary changes. The following year dyspnea and cough associated with easy fatigability severely limited the patient's activity, and he was forced to leave his job. Subsequently he was treated with oral cortisone and hydrocortisone for approximately 10 months, but little symptomatic improvement was noted.

At about this time he first began to note moderately severe attacks of costovertebral-angle pain on the right side, occasionally radiating into the flank and occasionally associated with urinary frequency. His general health remained essentially unchanged, although he noted some improvement in his general work tolerance. He returned to work in a new location and appeared to be doing somewhat better until approximately two years ago, when he had an episode of acute costovertebral-angle pain and passed a renal stone. Since then he has continued to pass stones, and some of the episodes of colic have been attended by fever, chills and pyuria. The diagnosis of pyelonephritis has been considered.

During the past year his blood pressure has been elevated (150/100), and more recently the blood urea nitrogen began to rise (40 to 70 mg. per 100 ml.). He again changed job locations, with continued productivity as an engineer. In the six months prior to admission he noted that he tired more easily and found it increasingly difficult to concentrate. Because of these symptoms he was referred to Duke Hospital for evaluation. There has been no history of peripheral edema, hematuria, visual disturbances, or headache. The family history revealed no renal or vascular disease.

Physical examination

The temperature was 37.5 C., pulse 90, and respiration 20. The blood pressure was 158/100 lying and 160/100 standing. The patient was a well developed, well nourished, sallow white male in no acute distress. Examination of the head and neck was negative. Breath sounds were prominent, without rales, and the lungs were clear to percussion. The heart was normal. Exam-

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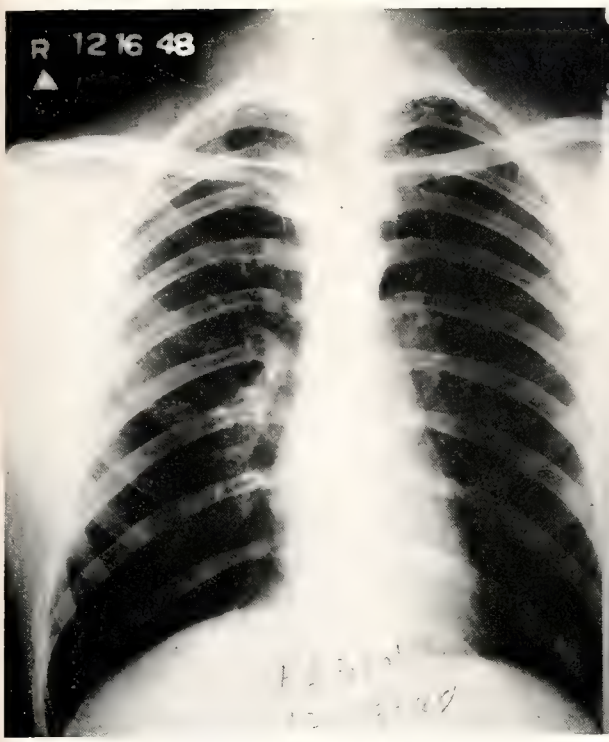


Fig. 1. Roentgenogram of the chest made December, 1948, six months after exposure to beryllium carbide.

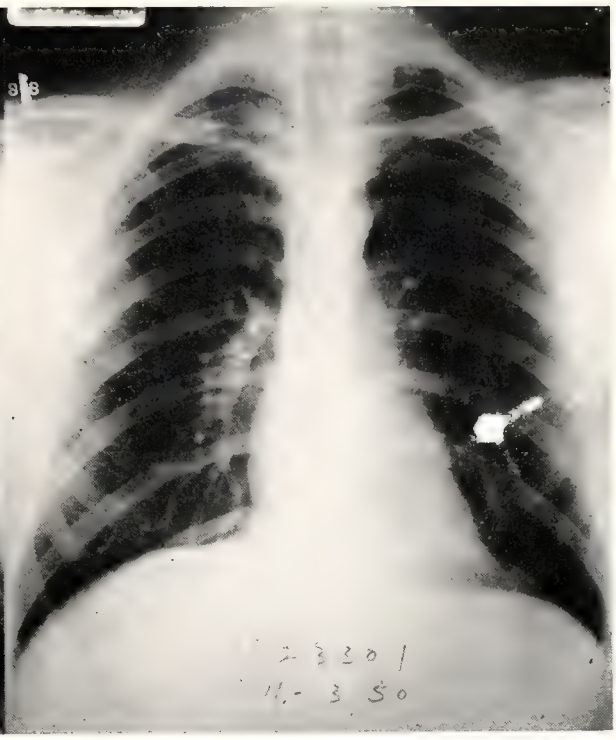


Fig. 2. Roentgenogram made November, 1950, two years after exposure. The patient was asymptomatic.

ination of the spine disclosed no costovertebral tenderness. The liver and spleen were not felt. Examination of the skeletal and muscular systems disclosed no clubbing. Reflexes were active.

Laboratory findings

The hemoglobin was 12.3 Gm. per 100 ml. There were 5,200 white blood cells, with 65 per cent polymorphonuclears, 3 per cent eosinophils, 18 per cent lymphocytes, and 14 per cent monocytes. A smear showed moderate microcytes. Urinalysis yielded the following data: pH reaction alkaline, specific gravity 1.010, a 1 plus reaction to protein, no sugar, from 40 to 50 white blood cells, and 5 to 8 red blood cells per high power field. The result of a phenolsulfonphthalein test was 15 per cent excretion of the dye in two hours. A urine culture showed no growth. The blood urea nitrogen was 70 mg. per 100 ml., sodium 140 mEq. per liter, potassium 4.9 mEq. per liter, chloride 98.3 mEq. per liter, carbon dioxide 27.2 mEq. per liter, calcium 11.7, 12.0 and 9.5 mg. per 100 ml., phosphorus 4.1, 4.2, and 4.7 mg. per 100 ml. The total serum protein was 7.8 Gm. per 100 ml. (albumin 4.1, globulin 3.7), cholesterol, 250 mg. per 100 ml., uric acid 13.6 mg. per 100 ml., magnesium 2.2 mg. per 100 ml., free cholesterol 73.7 mg. per 100 ml., and lipid phosphorus 8.34 mg. per 100 ml.

Roentgenograms of the chest (fig. 1) showed scattered areas of calcification among diffuse patches of parenchymal infiltration; abdominal films (fig. 6) disclosed bilateral renal calculi, and x-ray studies of the bones showed increased density with loss of fine trabecular markings. An electrocardiogram was within normal limits. Two skin tests (OT in a 1:1000 dilution, and histoplasmin) were both negative.

Course in the hospital

The patient was placed on the basic rice diet and received a five-day course of streptomycin and chloromycetin. On the fifth hospital day he spontaneously passed a renal stone which, on analysis, was primarily calcium oxalate with a relatively small amount of calcium phosphate. The patient had no respiratory symptoms during this period.

Comment

Type of exposure

The most frequent type of exposure for individuals who later manifest berylliosis has been in industrial units manufacturing



Fig. 3. Roentgenogram made February, 1952, four years after exposure and four months prior to development of symptoms. In retrospect, the lung fields demonstrate increased markings of a fine, punctate quality.

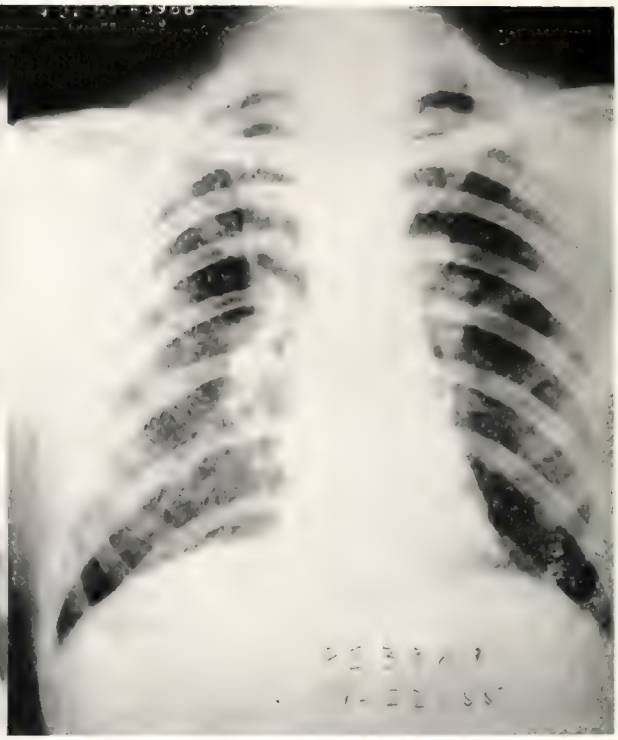


Fig. 4. Roentgenogram made September, 1955, three years after marked respiratory symptoms had been present.

items incorporating beryllium salt: radio tubes, fluorescent lamps, alloys, and so forth. Occasionally, beryllium salts have been employed in the preparation of units for nuclear radiation protection, resulting in exposure. In the experimental setting, however, such disease patterns are uncommon.

In this instance, the patient was attempting to develop a casing for nuclear material. Both beryllium and carbon were indicated elements to explore, since both have the property of modifying the speed of neutrons to a rate desirable to produce efficient nuclear fission. At the time that he was working with beryllium carbide, previous industrial exposure to this salt had not occurred and no specific hazard was considered likely. Of further interest was the intimate nature of the exposure. The patient carefully weighed out units of the beryllium carbide powder into sintering dishes, then fired these pellets in a furnace. The sintered pellets were then handled and examined closely for measures of density, porosity, and specific gravity. Although the total amount of beryllium actually present in the laboratory was probably not great, the exposure was of such close and constant range that the net effect was one of high total dosage.

Natural history of pulmonary lesions

Little commentary in regard to the sequence of pulmonary involvement is necessary. Figures 1-5, illustrating these lesions, demonstrate the progressive nature of the illness. The special features are the clear lung fields prior to exposure, the gradual appearance of lesions (which may be detected in retrospect) just prior to the appearance of symptoms (fig. 3), and the obvious and progressive character of the lung changes once symptoms had developed. Another notable point is the apparent amelioration of pulmonary discomfort, although the radiographic changes have become more marked. This feature has been recognized previously[1].

Renal lithiasis

The literature on berylliosis indicates that renal lithiasis developed in approximately 10 per cent of all cases. Recurrence of hypercalcemia has also been reported. When reviewing the reports, it became apparent that, although statistical incidence

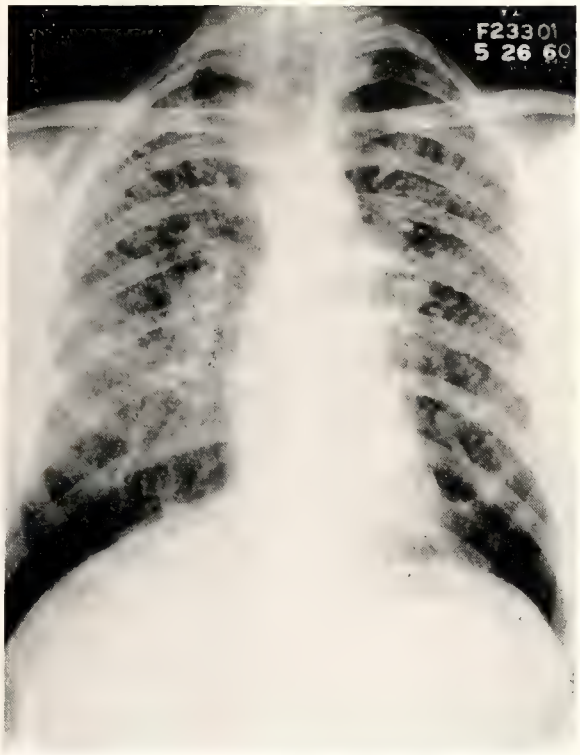


Fig. 5. Roentgenogram made May, 1960, demonstrating an increase in the density of the markings with the appearance of rounded areas of calcification.

was often cited, individual case reports were rarely mentioned. The evolution of symptoms in this patient makes berylliosis the most likely basis for the renal lithiasis, although a parathyroid adenoma, Boeck's sarcoid, or idiopathic renal lithiasis may also be considered as possible causes. A parathyroid adenoma is difficult to establish definitively in the presence of renal failure; histologic assessment of biopsy material will not distinguish the granuloma of sarcoid from a beryllium granuloma.

The basis for the lithiasis in berylliosis is not well established. Beryllium is a member of the alkaline-metal group to which calcium, magnesium and strontium belong. It has been postulated that beryllium replaces calcium in the bone (see figure 7 for the increased bone density characteristic of this disorder) and that hypercalcemia and hypercalciuria ensue. Only two cases in which metabolic balance studies were performed have been reported[2]. In these studies, a consistent negative calcium balance (high urinary calcium and moderately high fecal excretion) was noted. This finding accompanied a consistent negative nitrogen balance.

It might be presumed that in our patient, in view of the bone change and hypercalcemia, berylliosis had involved the bone tissue and replaced the calcium with consequent calcium mobilization, and that the renal lithiasis developed on this basis.

Latent period and onset of symptoms

Of considerable mystery to clinicians have been the factors determining the length of the latent period in this disease. The interval between the time of exposure to beryllium salt and the onset of pulmonary symptoms has varied widely—from one month to 15 years[1]. The variables determining this interval have escaped satisfac-

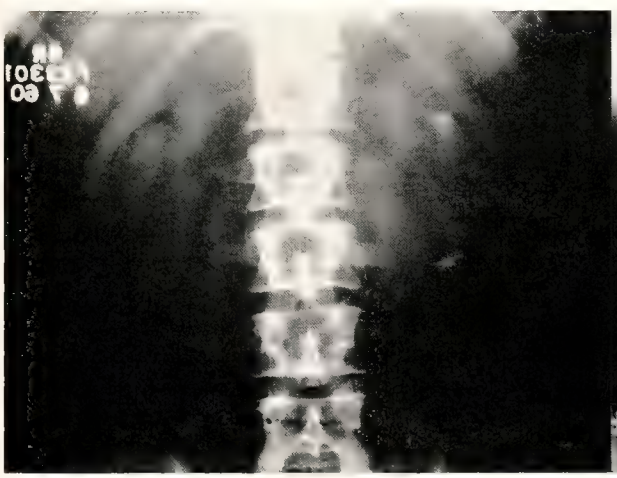


Fig. 6. Flat film of the abdomen demonstrating bilateral renal calculi. Small rounded density to the left of the transverse process of L2 is an enteric-coated medication.

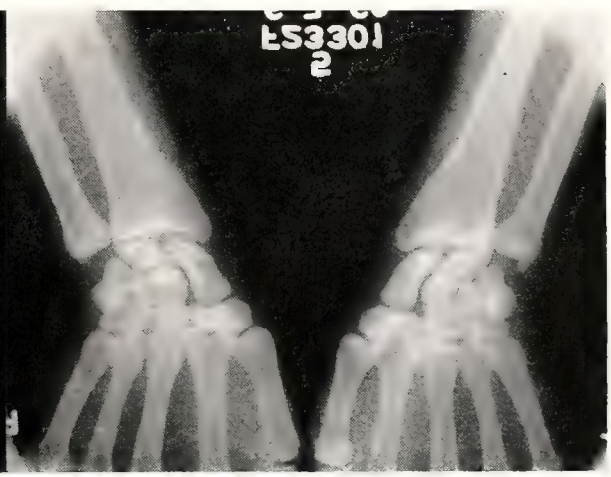


Fig. 7. Roentgenogram of the hands, demonstrating increased density with loss of fine trabecular detail.

tory analysis. It does not appear to be related to the total dose of beryllium, duration of exposure, or to age, sex, color, familial background or general health of the patient. There appear to be other factors influencing the balance between the host and the inciting agent. In the patient reported here, the possibility that behavioral issues were of some significance warrants consideration. These issues may be summarized as follows:

From the very first months of his marriage (1949) the patient wanted to have a family. After two years of marriage his wife sought medical consultation because she had not become pregnant. A series of studies was performed, during which the patient was quite anxious about the outcome. Finally, two months prior to the onset of symptoms (April, 1952), his wife was told that the Fallopian tubes were not patent and that she would probably never become pregnant. Both she and the patient were intensely disappointed, although he reports having tried to conceal "how upset I was . . . she was pretty blue." The patient experienced feelings of intense depression. "I realized my dreams of having a family of my own were crushed . . ."

Whether such affective experiences may influence the balance between the patient and the beryllium is certainly a matter for speculation. The work of Schmale[3], Greene[4] and Engel[5] indicates that these factors may contribute to the development of other disease entities. We would suggest that the alterations in biology that accompany meaningful affective experiences may play a role in determining the latent period of such a disorder as berylliosis.

Summary

A well documented clinical course of berylliosis is presented, in which the character of exposure, the progression of symptoms, the recurrence of renal lithiasis, and the circumstances under which they developed, all are sufficiently singular to warrant a report.

Acknowledgment

The authors wish to appreciatively acknowledge the permission of Dr. Walter Kempner to report this patient's history.

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We must try to understand the "advantages" of the role of the physically ill person in our modern Western civilization. He is excused from much responsibility, blame and failure. He can expect to be treated, at least for a time, with sympathy and kindness. It is much more acceptable to express feeling in the language of organs than it is to admit to having feelings of dependency and regressive longings. It is much safer to say that one has a headache than to express directly the rage felt toward an unreasonable boss. It saves self-esteem to believe that one has a grandular disorder rather than a deep-seated sense of sexual inadequacy.

By describing his difficulties in terms of the physicochemical machine, the patient throws all the responsibility on the expert "tester" or "repairman" we call the physician or surgeon and evades responsibility for his own health. If the difficulty is physical or structural, the patient has only to lie still while the surgeon cuts, or to pay for the pills the internist prescribes. On the other hand, if he admits that the difficulty exists in the interpersonal field, this obviously means that he himself must participate in and be responsible for his recovery. This is only another way of describing unrealistic dependency needs that the patient attempts to extract from the physician.—Faucett, R.L.: Symptomatic Management of the "Nervous" Patient, Minnesota Med. 41:692 (Oct.) 1958.

The Larynx in Health and in Disease: A Photographic Study

J. C. PEELE, M.D., M.Sc. (Medicine)
KINSTON

The first successful movies of the larynx were made by Dr. Francis LeJeune of New Orleans[1]. His contributions to the subject made him preeminent as a pioneer in this field and stimulated interest in both direct and indirect laryngoscopic methods. Additional contributions were soon made by Pressman and Hinman[2], Tucker[3], Lell[4], Solo and associates[5], Lierle and Kent[6], Herriott[7], Farnsworth[8], Jackson and Norris[9], Clerf[10], and Holinger[11].

Clerf, with the technical assistance of Mr. J. W. Robbins, devised an apparatus which could be used in the office for photographing the larynx by mirror laryngoscopy. The light delivered to the larynx by this apparatus was of such a degree as to permit a decrease in the size of the opening of the diaphragm, thereby increasing the focal depth. The results of their work were reported in 1941[10]. The original apparatus was subsequently changed, and to the best of my knowledge these changes have not been published. All of my work in laryngeal photography has been with the newer type of Clerf apparatus. My first photographic study of the larynx was presented before the Section on Ophthalmology and Otolaryngology, Medical Society of the State of North Carolina, May 8, 1951[12]. The present paper represents continued efforts in the field of laryngeal photography employing the Clerf apparatus.

The principles underlying photography of the larynx have been well outlined by Clerf[10]. However, the adjustment of the apparatus and the actual process of photographing the larynx can be learned only by experience. It is not an easy technique to acquire, and not every larynx lends itself to photography. For the benefit of those who may be interested in this type of endeavor, an attempt will be made to describe some of the detailed technique of laryngeal photography, since I do not believe that any such exposition has been previously published.

Read before the Section on Ophthalmology and Otolaryngology, Medical Society of the State of North Carolina, Asheville, May 5, 1959.

From the Kinston Clinic, Kinston, North Carolina.

Office Technique for Photographing the Larynx by Mirror Laryngoscopy

The equipment used in laryngeal photography consists of a camera, a Robo Laryngeal Attachment which was devised by Dr. Louis H. Clerf and Mr. J. W. Robbins of Philadelphia, and a No. 8 laryngeal mirror.

The camera used is a 16 mm. Bell and Howell auto load magazine type, with a Taylor, Hobson Cooke 2 inch F. 3.5 focusing mount coated lens. A Bell and Howell direct focuser is employed. The camera is set at a film speed of 16 frames per second, and the film used is 16 mm. magazine type A Kodachrome.

The camera is fastened on to the Robo Laryngeal Attachment by means of a screw, as shown in fig. 1A. The lever, which is located on the lower right side of the front of the camera, opens the shutter of the camera when pushed upward, and starts the camera running when pushed downward. The upper horizontal arm of a Z-shaped metallic bar fits into the slot immediately above this level (fig. 1B). The lower horizontal arm of this Z-shaped bar connects with the trigger shown in figure 1C. The trigger is situated in front of the pistol grip.

The Robo Laryngeal Attachment is held in the right hand by the pistol grip, with the right index finger on the trigger. Slight pressure backward on the trigger turns on the lights (250-watt projector) contained in the vertical metal housing cases (fig. 1D), while maximum pressure backward on the trigger depresses the lever on the front of the camera that starts the camera running (fig. 1E). The 250 watt projector bulbs are held in place in the vertical metal housing by means of screws along the lower portion of the housing.

The No. 8 laryngeal mirror has been soldered on to a semi-rigid handle that in turn fits into a rigid bent metal bar that has the approximate shape of the letter Z.

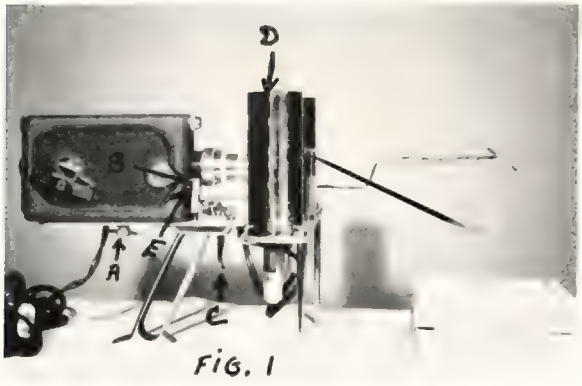


Fig. 1. Apparatus for laryngeal photography—side view.

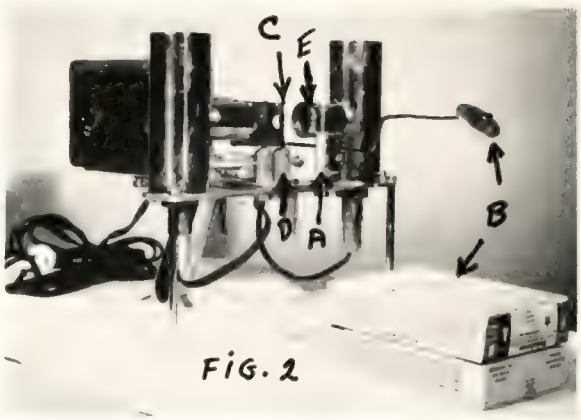


Fig. 2. Apparatus for laryngeal photography—front view.

When assembled, this bent metal bar is fixed in a vertical metal post by means of a screw as shown in fig. 2A.

Adjustment of the apparatus

In order to adjust the apparatus, plug the attached light cord into a wall socket (110 volts). Insert the laryngeal mirror in the vertical bar and tighten the screw to fix it in place (fig. 2A). Remove the camera from the apparatus, wind it up, and insert the direct focuser, which has been adjusted to a ground glass appearance. Now open the camera shutter by pushing the lever on the front of the camera upward. Open the shutter of the direct focuser by pushing inward the button on the lower left hand. Place the camera on the apparatus. Insert the upper horizontal arm of the Z-shaped bar in the slot above the lever on the front of the camera (fig. 1E). Now fix the camera on the apparatus by means of the screw shown in figure 1A.

Open the aperture of the lens to the fullest extent by means of the ring provided for this purpose. Turn on the lights by pulling back on the trigger, look through the eye piece of the direct focuser, and center the laryngeal mirror in the ground glass of the direct focuser.

Place the apparatus on the desk or table and put some reading material with fine print below the laryngeal mirror at a distance which you believe represents the distance between the inferior rim of the laryngeal mirror and the vocal cords (fig. 2B). Adjust the reflecting mirrors (fig. 2C) so as to concentrate the reflected light on the laryngeal mirror and fine print below (fig. 2B). Fix the reflecting mirrors by tightening the screws for this purpose. Once the reflecting mirrors are adjusted and fixed, it is rarely necessary to change them.

The reflecting mirrors are two in number, one on each side, and are held in position in the vertical metal bars by means of a screw (fig. 2D). When in position, the mirrors are so apposed in the midline as to form a V with the apex forward. In the illustration only a portion of each mirror is shown in the region of the apex of the V. The light from the vertical metal housing (fig. 1D) is conveyed through the horizontal arm of this housing (fig. 2E) on to the surface of the mirror, from which it is reflected to the laryngeal mirror (fig. 2B). In the center of the anterior edge of each reflecting mirror is a half-moon shaped aperture which permits an unobstructed view from the eye piece of the direct focuser to the laryngeal mirror during the preliminary focusing.

Preliminary focusing

The object of preliminary focusing is to try to get the lighting and focusing as near as possible to what you think will be necessary for the particular larynx to be photographed. This adjustment at best is only approximate, but it reduces the time required for trial and error focusing on the patient.

Look through the direct focuser and turn on the lights by pulling on the trigger. Focus on the fine print by tilting the laryngeal mirror toward the horizontal or vertical plane and moving it toward or away from the camera as necessary to secure a good focus. The laryngeal mirror may be tilted by simply grasping the mirror itself, but this may break the solter. A better method is to grasp the semi-rigid bar to which the

mirror is soldered by means of a pair of sharp-pointed pliers, such as are commonly used by ophthalmologists, and rotating the bar in such a manner as to tilt the mirror as desired.

More of the object to be photographed (fine print or larynx) can be reflected into the laryngeal mirror by tilting it toward the horizontal plane and moving the mirror further away from the camera. Too much tilting or too great a distance between mirror and camera, however, interferes with the concentration of light on the mirror and its reflection downward. Experiment with the adjustment until the fine print reflected from below into the laryngeal mirror above is in sharp focus. The tilt of the mirror and its distance from the camera and the fine print as shown in figure 2B are about what is needed for most cases of laryngeal photography. You are now ready to proceed with photographing the larynx.

Technique For Photographing the Larynx

Anesthetize the palate pharynx by spraying with a 1 or 2 per cent solution of pontocaine or other suitable topical anesthesia. Have the patient pull out his tongue with a piece of gauze held in his right hand. An assistant stands at the left side of the patient, who is seated in a conventional straight back chair. The assistant lowers her right hand from above, in front of the patient's face, and retracts the upper lip with her right index and middle fingers spread apart. This keeps the patient's upper lip out of the photograhic field. With her left hand the assistant depresses the patient's tongue with a metal tongue depressor inserted well back over the dorsum of the tongue to the base in order to keep it out of photographic field.

Now take the photographic apparatus in the right hand by means of the pistol grip, dip the laryngeal mirror in hot water, dry with gauze, and place against the patient's soft palate as in routine mirror laryngoscopy. Look through the eye piece of the direct focuser, turn on the lights, and observe the position of the larynx in the laryngeal mirror. Usually it is necessary to tilt the mirror slightly or move it toward or away from the camera in order to get all of the laryngeal image satisfactorily reflected into the mirror. Visualize the medial margin of the vocal cords and focus until the margins are in sharp focus. Look along the left side of the camera and note the position of the apparatus in relation to reflected image of the larynx. Remove the mirror from the patient's throat while the assistant releases the upper lip and removes the tongue depressor.

Remove the camera from the apparatus, take out the direct focuser, insert the film, and close the camera. Since this closes the shutter of the camera, be certain to open it again. Close the lens aperture to the desired F-stop (F-stop 8 is usually satisfactory for photographing all larynxes that can be photographed). Replace the camera on the apparatus as before. The assistant resumes her former position. Heat the laryngeal mirror by dipping it in hot water, dry, and place against the patient's soft palate as before, being certain that the apparatus is placed in as nearly the same position as during the previous focusing. This is done only by sighting along the left side of the camera. Turn on lights and check the lighting and position of the larynx in the mirror. If satisfactory, start camera running and make 20 feet or more of film.

Difficulties and precautions

The higher the larynx is situated in the neck, the more accessible it is for photographing. A deep-seated larynx cannot be photographed. A large, thick tongue makes the procedure impossible, and excessive salivation or constant swallowing may hinder it. The gag reflex can usually be controlled by adequate anesthetization. When the soft palate is unusually relaxed it tends to fold around the side of the mirror and obscure the image of the larynx along this side. If the preliminary focusing has not been very accurate, considerable time is needed to focus on the vocal cords. Because the photographic equipment is heavy, the procedure may be tiring and require rest periods if the preliminary focusing has not been accurate.

When the procedure for photographing the larynx is started, be certain that the camera is wound up, the shutter open, the lens aperture closed to the proper F-stop, and that the laryngeal mirror is placed in the proper position against the palate. It is impossible to visualize the larynx except by looking along the left side of the camera once the film has been inserted. Do not keep the lights burning so long as to cause them to become overheated and burst.

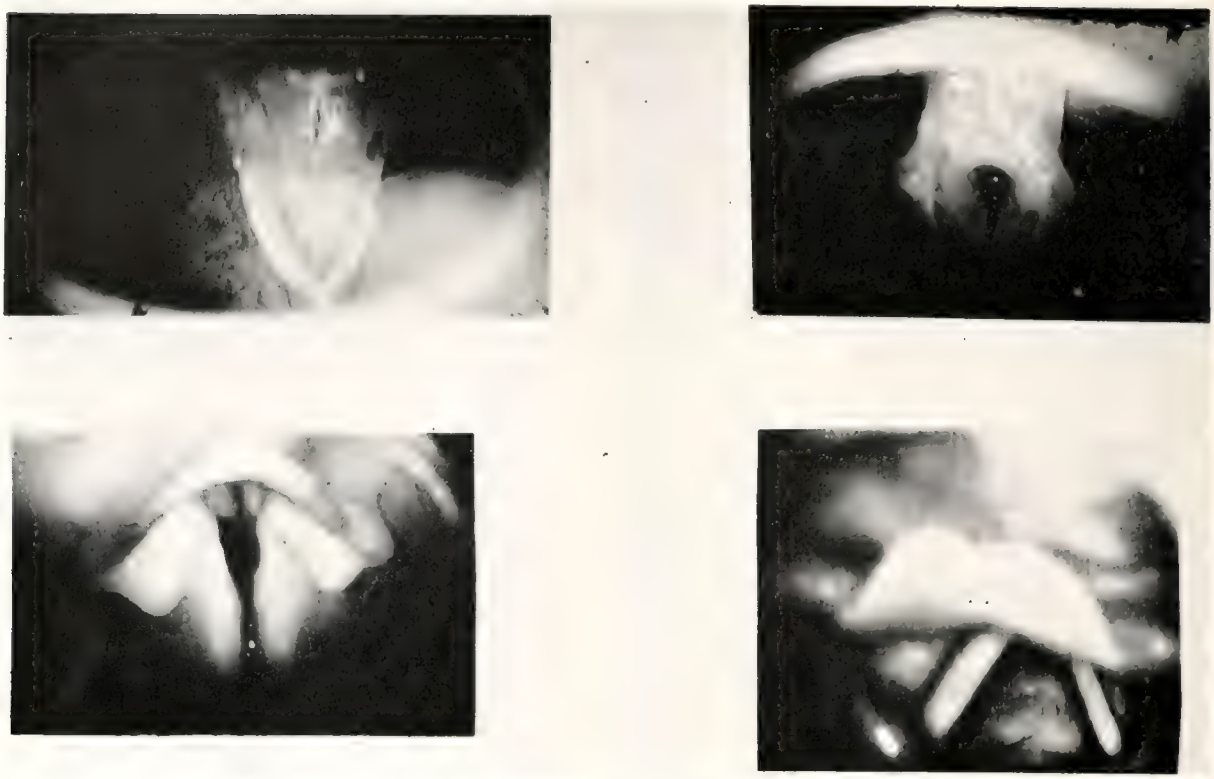


Fig. 3. Normal larrynxes: (a) Quail (upper left). (b) Rabbit (upper right). (c) Dog (lower left). (d) Human (lower right).

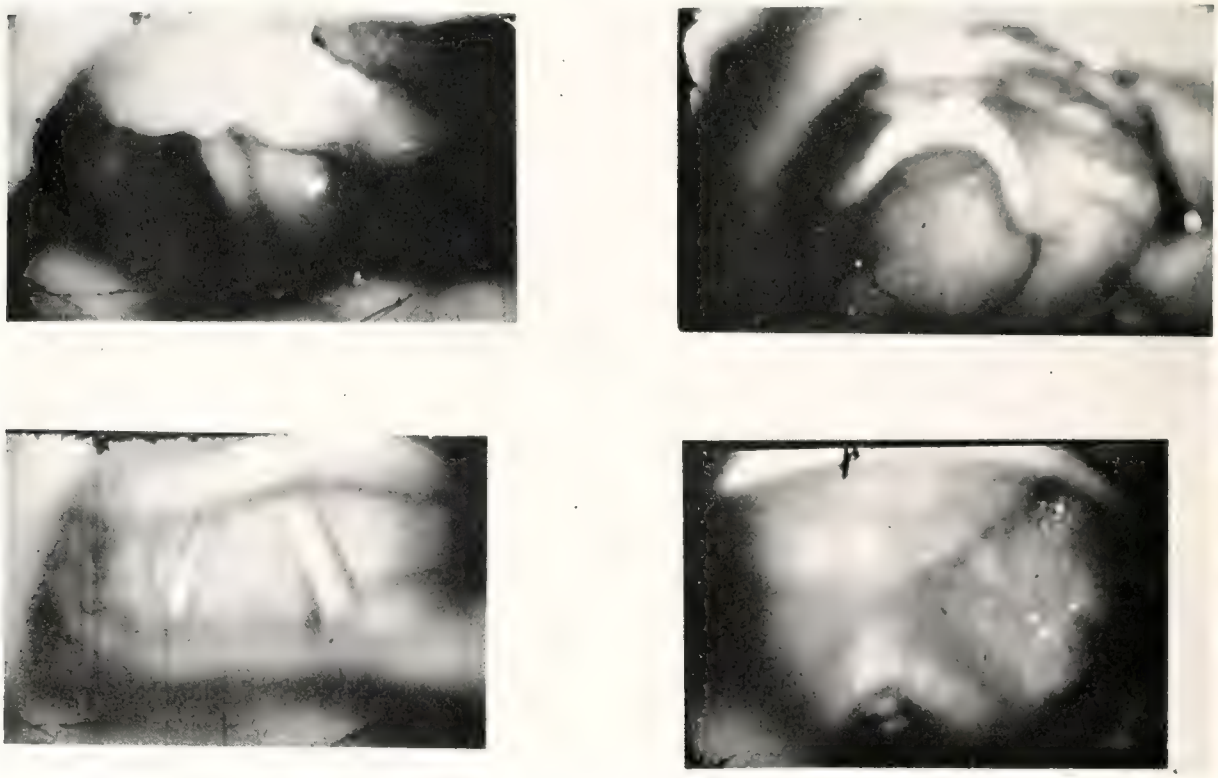


Fig. 4. Pathologic conditions of the larynx: (a) Carcinoma of the epiglottis (upper left). Inflammatory polyp (upper right). (c) Papilloma (lower left). Tuberculosis of the epiglottis (lower right).


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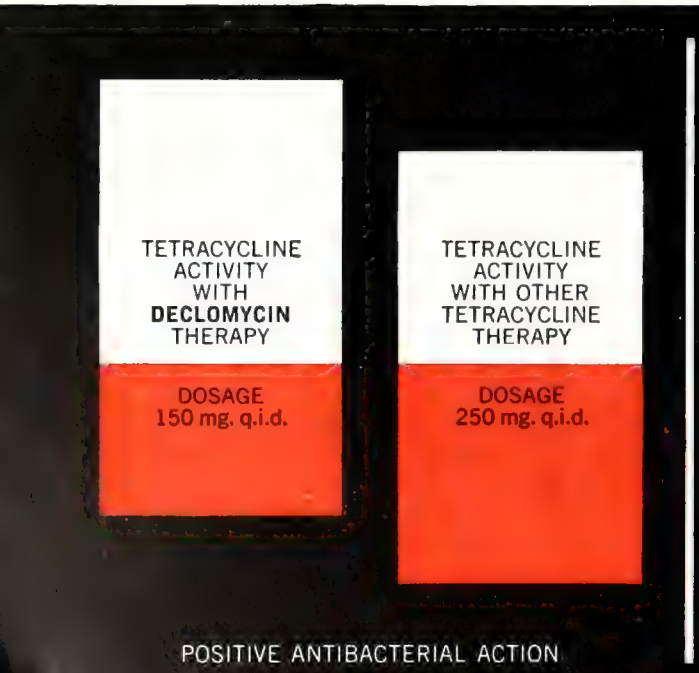
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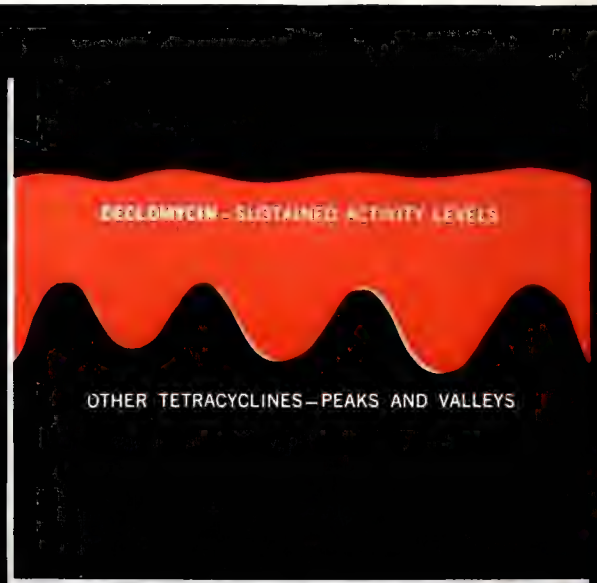
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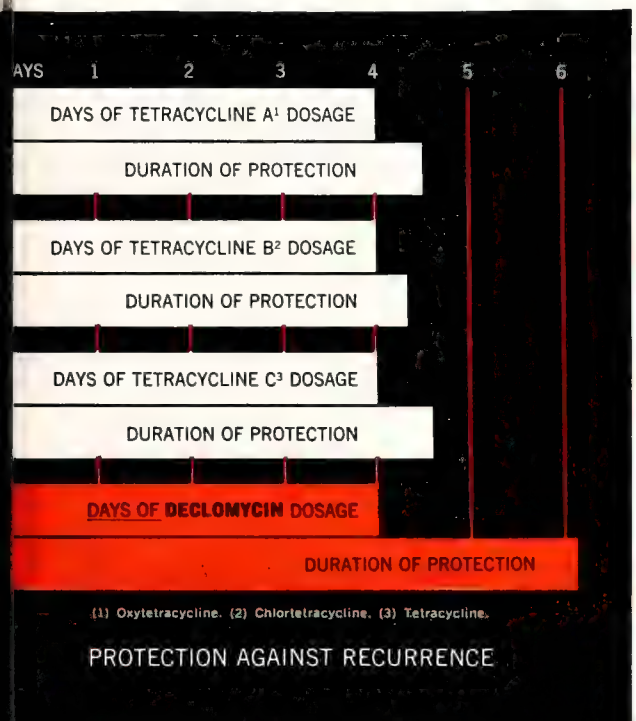
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			Annual Premium	Semi-Annual Premium	Annual Premium	Semi-Annual Premium
5,000	5,000 to 10,000	50.00 Weekly	$ 78.00	$ 39.50	$104.00	$ 52.50
5,000	7,500 to 15,000	75.00 Weekly	114.00	57.50	152.00	76.50
5,000	10,000 to 20,000	100.00 Weekly	150.00	75.50	200.00	100.50
5,000	12,500 to 25,000	125.00 Weekly	186.00	93.50	248.00	124.50
5,000	15,000 to 30,000	150.00 Weekly	222.00	111.50	296.00	148.50

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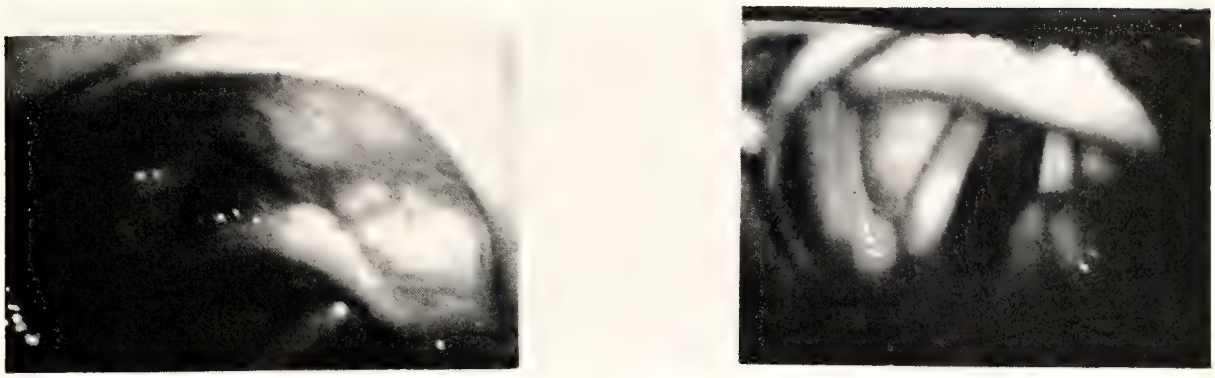


Fig. 5. Pathologic conditions of the larynx (continued). (a) Traumatic hematoma of the epiglottis (left). (b) Paralysis of the vocal cord (right).

Discussion of Illustrations

A study of figure 3 will afford the reader some idea as to the relative complexity of the anatomy of the larynx of the quail, rabbit, dog, and human being. The larynxes of the quail, rabbit, and dog are dissected specimens which were mounted and photographed in the fresh state. The human larynx was photographed in the living patient. The larynx of the quail (upper left) is somewhat typical of that of domestic fowls. It is represented by a longitudinal slit in the floor of the mouth, which serves as an airway but is not concerned with production of sound. Sound in fowls is produced by the syrinx (lower-larynx) and air-sacs attached to the tracheobronchial tree. The larynx of the rabbit is seen in the upper right of the figure and that of the dog in the lower left, while the human larynx occupies the lower right hand portion of the figure. The vocal cords of the human larynx are in a position of abduction, as is seen in quiet respiration.

Figures 4 and 5 represent some pathologic conditions of the larynx.

Figure 4 (upper left) shows an extensive carcinoma of the epiglottis. Figure 4 (upper right) shows a large inflammatory polyp completely filling the laryngeal introitus. In the lower left of the figure is a mulberry-appearing papilloma occupying the space between the vocal cords. In the lower right of the illustration is a swollen epiglottis due to tuberculosis.

Figure 5 (left) show a traumatic hematoma of the epiglottis, and (right) paralysis of the vocal cord (reader's right). Note that the vocal cord is abducted and appears shorter than the opposite cord because of the forward tilt of the arytenoid cartilage on the paralyzed side.

Report of Cases

Case 1

A 60 year old white man gave a history of soreness on the right side of his throat on swallowing, of about one year's duration. Four months previously a "knot" developed in the left side of his neck following a severe sore throat associated with marked systemic symptoms. The "knot" had continued to enlarge rapidly.

Mirror laryngoscopy in the office revealed an extensive ulcerative lesion of the epiglottis (fig. 4, upper left).

Direct laryngoscopy and biopsy were done. The pathologic diagnosis was cornyfying squamous cell carcinoma, grade 2.

Case 2

A 16 year old Negro girl had been subject to gradually progressive hoarseness following a severe sore throat two months before. There were no other symptoms referable to the larynx.

Mirror laryngoscopy in the office revealed a large pinkish-white smooth growth in the region of the anterior commissure and adjacent vocal cords. When the patient phonated, the mass projected above the vocal cords and completely filled the introitus of the larynx, as shown in figure 4, upper right.

Direct laryngoscopy and biopsy were done. Complete removal of the growth required two additional procedures. In each instance the pathologic diagnosis was inflammatory polyp.

Case 3

A white woman, 62 years of age, had become hoarse 36 years before. She consulted a well known otolaryngologist at the time and was told that she had a growth in her throat which should be removed. She did not accept this advice, but consulted a chiropracter who gave 60 light treatments to the neck without effect on the hoarseness. She then saw another otolaryngologist who removed her tonsils. This measure also had no effect on the

hoarseness, which had persisted constantly since the onset until the patient came under my observation.

About 1944 she began to experience considerable difficulty in talking. The voice became muffled, "broke" often, and became so low-pitched as to be hardly audible. At times she was aphonic. Two months before she came under my observation she began to experience difficulty in breathing. She consulted her family physician, who suspected a cardiovascular condition and prescribed accordingly. When the patient failed to respond, obstruction to the airway was suspected, and she was referred to me for diagnosis and treatment.

Mirror laryngoscopy in the office revealed a large, reddish, mulberry-appearing mass arising from the subglottic larynx beneath the anterior commissure. On phonation the growth projected upward between the vocal cords as shown in figure 4, lower left. At times it completely filled the laryngeal introitus.

Direct laryngoscopy was done for biopsy, and the remainder of the growth was removed at a second procedure. In both instances the pathologic diagnosis was squamous papilloma.

Case 4

A white man, 45 years of age, complained of hoarseness, difficult and painful swallowing, cough, and general symptoms. He had previously been treated in a sanatorium for pulmonary tuberculosis, but had failed to follow his prescribed medical regimen after discharge. The presenting symptoms had been present for about six months.

Mirror laryngoscopy in the office revealed a pale-red swollen epiglottis (fig. 4, lower right) and extensive ulceration of both vocal cords and the interarytenoid space (not shown in the illustration).

Biopsy was not done, since the diagnosis of pulmonary tuberculosis was established by a positive sputum examination and chest roentgenogram.

Case 5

A 62 year old white woman had been eating the tip of a chicken wing a short while before she came under observation. Without any symptoms to suggest that she had swallowed or aspirated a foreign body, the patient suddenly became frantic at the thought that she might have done so. She immediately began to remove the imagined foreign body by vigorously manipulating the pharynx. This induced gagging, vomiting, and coughing. The patient's sole complaint was the sensation of a foreign body in the throat.

Mirror laryngoscopy in the office revealed a hematoma of the epiglottis, as shown on the left side of figure 5.

Case 6

A 37 year old Negro woman gave a history of gradually developing hoarseness for the past six months. She cerebrated slowly. Contact with her friends and relatives established the fact that she had been in good health until the fall of 1952, when she began to complain of headaches and dizzy spells, and personality changes became noticeable.

Mirror laryngoscopy in the office revealed paralysis of the vocal cord (fig. 5, to reader's right). Suboccipital craniectomy and upper cervical laminectomy performed by a neurosurgeon established the diagnosis of a syringomyelic cavity extending from the upper cervical region into the lower medulla. The paralysis of the vocal cord was of central origin, due to syringomyelia.

Summary and Conclusions

The apparatus and technique for photographing the larynx have been described. The normal larynx of the quail, rabbit, dog, and human being have been included in the illustrations for comparison, and pathologic conditions of the larynx have been described in the case reports and illustrations.

Laryngeal photography is unexcelled as a medium for studying the normal function of the larynx, for recording pathologic conditions of the larynx, and as a medium for teaching.

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Chronic Disease Program In the Charlotte-Mecklenburg Health Department

ELIZABETH CONARD CORKEY, M.D.
CHARLOTTE

All health departments engage in activities having to do with chronic disease. It is only as such activities are integrated into a well planned whole, however, that we can say that we have a chronic disease program.

A good program should include good preplanning. Some method of estimating the need and a plan for case finding are necessary. There must be resources for diagnosis and treatment of discovered cases or the program is a futile gesture. Finally, there must be a means of keeping and summarizing adequate records so that the effort expended can be evaluated at intervals. Such well planned, well executed, and well evaluated programs are rare. Constant demands for service cause us to ride off in all directions, so that we often feel that our activities are "full of sound and fury, signifying nothing."

How do we develop a program from the many activities crying for attention? Sometimes programs grow spontaneously. Communities demand certain activities, and we later construct the supporting framework. On other occasions a program springs, like Athena, full grown from the head of Jove. In Charlotte, we find ourselves with many chronic disease activities in various stages of development.

For the sake of clarity, let us accept the definition of chronic disease used by the Commission on Chronic Illness[1]: "Chronic Disease comprises all impairments or deviations from normal which have one or more of the following characteristics:

Are permanent
Leave residual disability
Are caused by nonreversible pathologic alterations
Require special training of the patient for rehabilitation
May be expected to require a long period of supervision, observation or care."

Let us further agree that chronic disease programs can be directed toward primary prevention—for example, averting the initial occurrence; and secondary prevention —for example, early discovery, halting the progress of the disease, and preventing serious sequelae.

As public health personnel, we have had experience in both areas of prevention. Let us mention two examples. In maternal and child health programs we have stressed primary prevention of disease by promotion of health and immunization against specific diseases. In tuberculosis programs we have stressed secondary prevention by early diagnosis and intensive treatment to limit the irreversible pathologic changes.

We have also learned that we do not have to be personally responsible for carrying out every step of a program. To cite the maternal and child health program again, we are gratified when private physicians carry out the bulk of well-child supervision and immunization practices in their own offices. We feel the necessity, however, of carrying on where their activities leave off, notably among the careless, the ignorant, and the indigent. But where other agencies will assume responsibility for any part of a program, we are ready to assist or to retire.

For this discussion I want to describe briefly some current chronic disease programs and activities in Charlotte.

Bedside Nursing

In February, 1919, the Charlotte Cooperative Nursing Association was organized. Direct financial support came from the Woman's Club, the Good Fellows Club, the Red Cross, and four textile mills. Visits were sold at cost to the Metropolitan Life Insurance Company and Western Union, and to patients able to pay. Approximately one third of the total budget came from city taxes.

The nursing unit was under the direction of the health officer and director of nursing. Although later the textile mills and the Metropolitan Life Insurance Company withdrew their support, the Woman's Club and the Good Fellows Club continued

to give financial assistance for the bedside program until 1935, when the City of Charlotte assumed all financial responsibility. At present no charge is made to anyone for the service.

The population of Charlotte has steadily increased. At present it is estimated at 165,000* Thirty-six nurses are participating in a generalized program, including bedside nursing, under the direction of a director of nurses and two supervisors. Patients may be referred to the nursing service by social agencies, clinics and physicians, and individuals. A visit is made in response to every call, regardless of financial status, and services are given patients on the basis of need. No treatment or medication is ever given by the nurse without an order from a physician. When cases are referred by social agencies or individuals, the nurse counsels with the patient to see that he is placed under the care of a private physician or a clinic according to his financial status. She is then in a position to give the needed service.

The following table indicates some types of patients visited.

Table 1
Public Health Nurses
Patients With Chronic Diseases Visited By
1958-1959

Disease	No. Cases	No. Visits
Heart	620	7732
Cancer	103	967
Diabetes	187	2181
Arthritis	92	817

It is obvious that these visits represent a considerable expenditure of time and money for the alleviation of the effects of chronic disease.

Diabetes Program

In contrast to the Bedside Nursing Program (or, more correctly, "bedside nursing activities"), which grew slowly, is the Diabetic Program. The United States Public Health Service survey in Oxford, Massachusetts, indicated that 1.7 per cent of the population is diabetic (according to Dean W. C. Davison at Duke, the incidence among children is 1 in 2,500). It is well known that the likelihood of diabetes increases with age. The incidence in our community was not known, but it seemed likely that similar rates prevailed. Furthermore, it was not unlikely that the number of unknown cases would approach that of the known.

Blood for diabetes screening and other tests is drawn from all applicants for admission to the prenatal clinic at Good Samaritan Hospital, all patients admitted to the indigent medical clinic, the venereal disease clinic, and all other persons requesting blood tests who are 21 years of age or older (for example, applicants for premarital blood tests).

Laboratory slips are prepared in duplicate and sent with two specimens, one for a serologic test for syphilis and one for blood-sugar screening, to the laboratory of the Health Department. The data recorded on the slips at the time blood is drawn are: date, laboratory test, name, address, color, age, sex, past history of diabetes, and the name of the clinic requesting a laboratory examination.

Blood sugar is tested at 160 mg. per 100 ml. on the clinitron, and the results are recorded on the laboratory slip. All specimens testing positive at this level are retested by the Folin Wu method and the results of both tests are recorded in a ledger.

Patients with positive results at 160 mg. per 100 ml. on the clinitron but below 150 mg. per 100 ml. by the Folin-Wu method have not been recalled. All those testing between 150 and 200 mg. per 100 ml. by the Folin-Wu method are recalled and tested, after a test meal, at one and two hour intervals, both for blood sugar and urine sugar. Those testing higher than 200 mg. per 100 ml. by the Folin Wu method on the original specimen are recalled for fasting blood sugar determinations and modified glucose tolerance tests later, if indicated.

It has been found preferable to have a public health nurse visit all persons recalled for retesting. A visit gives the nurse an opportunity to interpret to the patient the meaning of the positive screening test and the importance of diagnostic studies, as well as to instruct the patient about what to eat before the retest. If the nurse fails to see the patient, a follow-up letter is sent. Retesting is offered to all with positive reactions, without financial eligibility screening.

When patients return for retesting, they are interviewed by the clinic nurse and a history is taken. The history includes: (1)

*The 1960 Census places it at more than 200,000.

previous diagnosis of diabetes, (2) family history of diabetes, (3) symptoms, (4) complications or other diseases and significant conditions.

Patients coming from the prenatal and general medical clinics have already been screened for financial and residence eligibility. Other screenees from the venereal disease clinic and applicants for health cards are asked by the clinic nurse where they will receive their medical services. If they do not have a private physician and are probably eligible for clinic service, an application is prepared for social service screening.

If the results of the test are positive, patients eligible for clinic services are admitted to the general medical clinic for further testing, if indicated, and diagnosis. Then the patient is followed by, and continues to receive medical supervision from, the clinic. Patients who are not eligible for clinic services are directed to their private physicians with a request to return a report of the diagnosis. Those patients who are referred to private physicians are followed by the public health nurses until they are known to be under medical care. Nursing follow-up may continue if the patient and the physician so desire.

A register card suggested by the records consultant has been prepared and is in use. A monthly tabulation of screenees by clinic source, age, sex, and race is also in active use.

This program and method of recording conform strictly with procedures established by the USPHS. The Service paid the salary of a nurse, lent a clinitron, and furnished other equipment and reagents. It also provided expert consultation on records.

Over and above the bare statistics, unexpected dividends have accrued to the department. There was a new interest and concern with diabetes as a public health problem. A workshop on diabetes was held, to which public health nurses from neighboring counties were invited. Nurses took a more intelligent interest in their diabetic patients and were able to render more valuable service. The medical clinic for indigent patients had long been seeing diabetic patients. Now these patients became of special interest to the nurse in charge of the program. She familiarized herself with their problems and interpreted their needs to the doctor. With this data, he was able to give them better professional care.

At present the clinic is following 52 cases* of diabetes, including 16 newly discovered cases and 5 old ones rediscovered by the program. The nutritionist holds individual conferences on diet with patients. Her advice is then made available to nurses carrying the patients in their case load. Efforts are also being made to test families of diabetic patients. It is hoped that space in the new building will be found for a more extensive educational program for patients.

Heart Disease Program

A heart disease program has been needed for some time. As in other communities, heart disease is our leading cause of death. Table 1 shows that during the past four years 27.6 per cent of the morbidity visits have been made to patients with cardiovascular disease. Activities having to do with cardiovascular disease previously included education, home nursing, and patient visits to the indigent medical clinic. These activities were not organized, and neither primary nor secondary prevention were seriously considered.

A very small beginning of a program was made in June, 1956, with the establishment of the Children's Heart Clinic, held once a month. This clinic was originally established with the cooperation of Heart Services and the Charlotte-Mecklenburg Public Health Department. In December, 1956, the Crippled Children's Division of the State Board of Health authorized the establishment of a Rheumatic Fever Control Center. In June, 1957, two clinics a month came into being. Any child may be referred to the clinic by a physician, irrespective of financial status. After the initial evaluation, or if the child is accepted for service, welfare certification under the Crippled Children's program is required.

The financing of the clinic is complicated. Two clinicians serve each clinic, and are paid by the Crippled Children's Division of the State Board of Health. We are also reimbursed on the basis of the number of patients attending a clinic. In addition to these funds, Heart Services contributes toward the services of a part-time senior

*In July 1960, 85 cases were being carried.

public health nurse who is in charge of the program.

Heart Services also provides considerable equipment for the clinic and volunteers to help in the transportation of children, to serve as clinic aides, and occasionally to give special medication. Oral and intramuscular Bicillin are provided by the Crippled Children's program for eligible children. When children are ineligible because of age, the City-County Health Department provides drugs for those unable to pay.

A records consultant from the USPHS gave assistance in this department, and this year a cardiac register was established.

This program has elements of primary prevention. The child who has had rheumatic fever without demonstrable heart disease gets prophylactic medication. The majority of patients, however, already have either congenital or rheumatic heart disease. Prophylaxis is also required for secondary prevention—for example, halting the disease process and preventing such sequelae as myocarditis and cardiac decompensation. Even this has not been completely possible. So far, we have lost one patient with rheumatic heart disease. It has become obvious that many of these children should be followed into adulthood. We hope that this can be arranged.

An important element in secondary prevention is case finding. Routine school examinations have brought some cases to light. The Mecklenburg Heart Association has taken an active interest in the problem by organizing heart surveys in various schools. The local committee sends out history cards to all parents and makes sure that all are returned. Public health nurses take pulse rates and blood pressure readings on all children. On the appointed day, a team of volunteer physicians examines the hearts of the children by auscultation—a time-consuming activity. Many murmurs are detected, but the number of cases of significant heart disease is small. It will take years of follow-up to see how many of these children with murmurs, but no history of rheumatic fever and no other sign or symptom of heart disease, develop significant cardiac changes. The differential diagnosis between functional and pathologic murmurs is not easy, even for skilled clinicians. I am reminded of the old saying: "The only doctor who never makes a mistake is the one who never holds a consultation or does an autopsy."

Glaucoma Screening

Among the many disabling conditions, blindness is one that imposes severe limitations on the patient. Public health programs have long stressed the primary prevention of blindness. Examples are the use of silver nitrate in the eyes immediately after birth to prevent ophthalmia neonatorum, and the compulsory prenatal blood test for the diagnosis of syphilis, a leading cause of keratitis and optic atrophy. In other countries the emphasis on vitamin A in the diet has prevented keratomalacia. Trachoma has also been attacked both abroad and in this country among the Indians. At present glaucoma is classified as a leading cause of blindness in this country. In California it causes 14 per cent of the cases of adult blindness. Case-finding programs have been carried out in various cities. It has been estimated that from 2.5 to 3 per cent of persons over 40 will have elevated tonometer readings, and 2 per cent will prove to be glaucomatous.

In 1957 a group of ophthalmologists, scheduled a week's screening program in Mercy Hospital. This program proved so fruitful that it was repeated in 1958. This time the planning was more extensive. Volunteers acted as hostesses, two public health nurses were assigned to assist the doctors, and representatives of the National Association for the Prevention of Blindness participated. Of 750 patients tested, 42 had ocular hypertension. These patients were advised to see their physicians, but there was no organized follow-up. This year the screening week will be even more carefully organized. Public health nurses will again assist, and the capable president of the state chapter of the National Association for the Prevention of Blindness is in charge of the volunteers. Follow-up letters will be sent by the organization to all patients with positive readings and to their doctors. Where no reply is received, public nurses will cooperate in follow-up.

Comment

The long established tuberculosis and venereal disease programs are really chronic disease programs and serve as good prototypes in planning attacks on hither-

to unexplored areas of chronic disease. Tuberculosis programs, especially, have pioneered in the field of discovery through screening, and control through long-term follow-up aided by the use of a case register.

With the advent of new drugs, tuberculosis and venereal disease show promise of being cured. In diabetes, rheumatic heart disease, and glaucoma we have three chronic diseases which at present we cannot hope to cure. Only continuous medical supervision and treatment offer any hope for prevention of disability or death. This requires a great deal of understanding, discipline, and cooperation on the part of the patient. In low income groups it may require great personal and family sacrifice as well. This is so clearly evident that one wonders why we do not devote more attention to the economic impact of chronic disease. Families on marginal incomes cannot add even $5.00 a month to the budget without real deterioration in an already depressed standard of living. Insulin or penicillin, together with private medical care, can rarely be purchased for so little. It is a paradox that while a categorical grant can be given to the disabled, few communities have any way to care for the low income diabetic or rheumatic heart patient before he becomes disabled.

We do not yet know how to get primary prevention for many diseases. We do understand secondary prevention, but often it is not provided. It has been a personal satisfaction to me to feel that, after new cases are found by means of screening procedures, we have clinic facilities to carry through a program of secondary prevention. I am also convinced that, as with tuberculosis, the best case yields come from people seeking medical care in clinics or doctors' offices. Every practitioner should be on the alert for diabetes and glaucoma in patients over 40. Yet recently an internist told me he discovered diabetes in a patient finally referred to him for diagnosis after 12 years of care by his physician!

Summary

Chronic disease programs in home nursing, diabetes, and children's heart disease have been described. Activities aimed at the discovery of glaucoma have been reviewed. On the basis of our experience it is probable that there are at least 1,600 undiscovered cases of diabetes in Charlotte and Mecklenburg County. There may well be twice that many cases of glaucoma.

As more children are born each year, cases of congenital heart disease and rheumatic heart disease can be expected to swell our case register by at least 100 a year. A means of following children with rheumatic heart disease into adulthood is necessary to complete the picture.

It is obvious that there is a great need for the development of chronic disease programs designed to discover new cases and to see that these patients receive the proper care and follow-up. A case register is a useful tool in every program.

Hepatic Amebiasis Treated with Plaquenil

Case Report

HUGH O. QUEEN, M.D.
HAMLET

Intestinal amebiasis is often complicated by involvement of the liver which may be slight, causing only focal necrosis, or extensive, forming multiple small abscesses or a single large abscess. The disorder should be treated as soon as it is suspected to prevent widespread hepatic damage, which may prove fatal. None of the presently available amebicidal agents will cure both intestinal and extra-intestinal amebiasis, and a combination of two or more drugs is advisable. Chloroquine phosphate (Aralen)*, a relatively nontoxic, oral amebicide, has been recommended as an effective agent against liver infections since its first use in 1948[1]. More recently another 4-aminoquinoline, hydroxychloroquine sulfate (Plaquenil)*, has been found as effective as chloroquine in treating hepatic amebiasis, although it has had limited use up to now[2]. Plaquenil may offer an impor-

*Aralen Phosphate, brand of chloroquine phosphate; Plaquenil Sulfate, brand of hydroxychloroquine sulfate, Winthrop Laboratories, New York, New York.

tant advantage over chloroquine, since it appears to be better tolerated.

In the following case report, a history suggestive of acute amebic hepatitis was confirmed by the presence of *Endamoeba histolytica* in the stools. Encouraged by Sepulveda's most recent report[2b] led to the use of Plaquenil in an attempt to cure the hepatic infection. The intestinal focus was treated with tetracycline.

Case Report

A 10 year old white male was first seen on May 13, 1959. He complained of abdominal pain, headache, and anorexia of three months' duration which had become worse in the week before examination and caused absence from school for three days. Abdominal pain was generalized, but was most painful in the right upper quadrant. The boy had lived in five different parts of the country while his father was in military service.

Physical examination showed a pale, sallow boy with approximately 50 small hemangiomas over the upper trunk, face, neck, and edge of the scalp. The most remarkable feature was tenderness in response to light pressure over the liver and right upper quadrant and some slight generalized abdominal tenderness. There was no jaundice, diarrhea or vomiting.

Laboratory data: The hemoglobin was 9.8 Gm. per 100 ml. The icterus index was 5 units. The direct Van den Bergh test was negative after 10 and 30 minutes, the indirect Van den Bergh was 0.15 mg. per 100 ml. after 10 and after 30 minutes. Stools were positive for cysts of *Endamoeba histolytica*.

Achromycin (tetracycline) oral suspension (125 mg. per 5 cc.) was prescribed in doses of 1 teaspoonful four times daily for the intestinal infection. Fergon Compound Liquid* (ferrous gluconate, 250 mg. per 5 cc., with vitamin B complex) was given in doses of 1 teaspoonful three times daily to correct the slight anemia.

The patient was seen again on June 6. There had been a great improvement in appetite and no further abdominal pain except mild soreness in the right upper quadrant. The patient felt the medicine had been very helpful. Physical examination showed only one small angioma. Facial color was better. Although there was no generalized abdominal pain, a mild thump over the liver produced moderate discomfort. The hemoglobin had risen to 11.5 Gm. per 100 ml.

Plaquenil was given in doses of one 200 mg. tablet, twice daily for two days and then once daily for 14 days.

On June 16 there was less tenderness over the liver area and the patient felt much better. At the final examination on June 25 there were no complaints and physical signs were normal. Stools were negative for *E. histolytica* on June 10, 16, 18 and 25.

Summary

A 10 year old patient with hepatic amebiasis was successfully treated with Plaquenil sulfate. This case is of particular interest since there have been few published reports of Plaquenil as an amebicidal agent. It is well tolerated, and further exploration of its value in extra-intestinal amebiasis is warranted.

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*Fergon Compound Liquid, Winthrop Laboratories, New York, New York.

REPORT FROM

The Duke University Poison Control Center

J. M. ARENA, M.D., *Director*

A 3 year old white boy was admitted to the Duke Pediatric Service in 1958 with the chief complaint of convulsions due to a fall in which he struck his head. The history of the complaint and the symptoms did not coincide, and our staff, being always conscious of intoxication, began further questioning along these lines. The following history was obtained.

The child had been well until the day before admission, when lethargy and pain developed in the lower extremities. He subsequently became stuporous and began to have generalized convulsions. At the local hospital the convulsions could not be controlled by the use of sedatives. Examination of the spinal fluid was negative.

Several days before this child's admission, several members of his family had had febrile episodes characterized by nausea, vomiting and diarrhea, associated with muscle pain. One sibling was ill at the time. There was also the history that the patient had been playing around a truck used on the family's farm, and had fallen from it, striking his head.

The past history was negative. The family history revealed that a paternal cousin had epilepsy.

Physical examination: The temperature was 39.8 C., the pulse 140, the blood pressure 106 systolic, 70 diastolic, respiration 30 (Cheyne-Stokes). The patient was a well developed, well nourished white male in coma and having frequent generalized convulsions. The pupils reacted sluggishly to light. The liver was felt 2 cm. below the right costal margin. The patient was comatose, with flaccid extremities, and did not respond to stimuli.

Accessory clinical findings: The hemoglobin was 10.5 Gm., hematocrit 33 vol. per cent, and the white blood cell count 25,000, with 26 per cent stab cells and 20 per cent polymorphonuclears. Urinalysis revealed a 1 plus reaction to protein. Stool examination revealed a 2 plus guaiac reaction. O.T. skin test (1:1,000) was negative. Spinal fluid examination and culture were also negative. The urinary chlorides were within normal limits. Blood chemistry determinations were as follows: fasting blood sugar 111 mg. per 100 ml., nonprotein nitrogen 25 mg. per 100 ml., sodium 124 mEq. per liter, potassium 5.6 mEq. per liter, chloride 85.1 mEq. per liter, carbon dioxide combining power 19.8 mEq. per liter. Weltmann reaction was 2.5. Urine and blood cultures were negative.

Hospital course: The child was placed on intravenous fluids and was given barbiturates and paraldehyde for convulsions. A tracheotomy was performed, and he was placed in a respirator. Despite the history, the possibility of intoxication was raised, and after repeated questioning of the family it was learned the Chlordane was kept on the truck on which the patient had played. On several previous occasions he had been caught trying to play with the container. Investigation disclosed that the container had been opened and was almost empty.

Since the ingestion had occurred the day before admission, gastric lavage was not done. Within the next few days the convulsions ceased and the sensorium cleared. The patient was removed from the respirator without resultant difficulty. Initially it was difficult to control the sodium levels, but this imbalance was corrected by large doses of saline. The tracheotomy was removed on the sixth day, and two days later the patient was discharged, feeling well.

A follow-up examination several weeks later disclosed that his course continued to be uneventful.

Comment (Chlorinated Insecticides)

Indane derivatives (Chlordane, Heptachlor, Aldrin, Dieldrin, Endrin, Diendrin) are synthetic-fat soluble, but water insoluble chemicals which, either singly or combined in the form of dusts, wettable powders or solutions, are used as insecticides for the control of flies, mosquitoes, and field insects. Aldrin, the most toxic of these agents, is two to four times as toxic in animals as is Chlordane. The other derivatives have intermediate toxicity. Symptoms can occur in man after ingestion of, or skin contamination by, 15 to 50 mg. per kilogram of body weight. Acute poisoning from ingestion, inhalation, or skin contamination is characterized early by hyperexcitability, tremors, restlessness, ataxia, and tonic and clonic convulsions. Since in animals liver function is impaired well below lethal levels, the toxicity of these derivatives are enhanced in human beings who have had liver damage.

Treatment: If ingested, the material must be removed from the gastrointestinal tract by gastric lavage and saline cathartics such as Epsom salts. Fats and oils, such as oil purgatives, demulcents and evacuants, as well as milk, should be avoided, because they increase the rate of absorption of chlorinated hydrocarbons. In the event of skin contamination, prompt washing with soap and water is required to prevent irritation and reduce systemic absorption. If muscular twitching or tremors develop, phenobarbital sodium should be administered. For treatment of convulsive states, the more rapid, shorter-acting barbiturates such as pentobarbital sodium are indicated. Maintain clear air passages and administer oxygen. If liver or kidney damage is suspected, a low fat, high carbohydrate and protein diet should be prescribed, together with other appropriate measures.

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MEDICAL RESEARCH, CHOKED BY DOLLARS

The October issue of *Harper's Magazine* has a special supplement of eight articles entitled "The Crisis in American Medicine." None of the articles, to put it mildly, are flattering to the medical profession, but some of them contain really constructive criticism. In the most thought-provoking of these, Mr. John M. Russell, president of the Markle Foundation, is admittedly swimming against the current when he questions the popular idea that any medical problem can be solved if only enough money is spent for "research," and that the greater the amount raised, the more quickly the answer will be found.

Mr. Russell writes that for a long time he had wanted to protest against the "misplaced enthusiasm of ill-informed but enormously kindhearted people," which not only has led to a terrific waste of both public and private funds, but threatens to delay rather than accelerate progress in medical research. He had hesitated to speak up, because he knew that he would be branded as a heretic if he hinted that more money for research is available than can possibly be used wisely. Furthermore, he was not a scientist and did not have first-hand knowledge of a long and eventually fatal illness. After watching the person dearest to him die slowly of cancer, however, and being himself treated for the dread disease, he thought that while he was still no scientist, he could claim to have first-hand knowledge of his subject.

Mr. Russell makes three points about medical research: (1) That the conquest of disease is very different from building an atomic bomb; (2) That men, not money do research; and (3) That freedom is as important for a research worker as for anyone else.

The atomic bomb, he says, was the result of fitting together bits of knowledge already available. On the other hand, in the sciences we are in an earlier stage of exploration and discovery. The so-called "team approach" to medical discovery is no substitute for individual intuition. He quotes one frustrated scientist as saying, "You can't make nine women pregnant and thereby produce a baby in one month."

Mr. Russell comments that our Congressmen have discovered that medical research has as good political possibilities as agriculture, and that they should be made to realize that their generosity with tax funds may actually stifle progress. He states emphatically that money alone will not solve our medical problems, and that already far more funds are made available through the various volunteer fund-raising agencies and Congressional appropriations than can possibly be used wisely. Medical research workers are being urged to accept more money in grants than they need. As a result of the huge appropriations, scientists are put under pressure to produce some evidence of their activity in the form of papers and progress reports. Furthermore the research workers assume a moral obligation to confine their energies to a particular problem instead of following promising trails in other fields.

One result of overemphasis on pure research is that many good teachers are taken

from medical schools and put into laboratories. He quotes one medical educator as saying: "Because we can't compete with the salary scale and the superb laboratory facilities that the government can offer, many good men have been lost to medical education and are being hoarded by the government. This will eventually be reflected by a decrease in the standards of medical school teaching."

Doubtless Mr. Russell has in his forthright comments spoken for many medical educators, scientists, and thoughtful citizens who have hesitated to question the wisdom of thinking that all medical prolems can be quickly solved by spending enough money. May his wise counsel have a salutary effect on the over-all problems of research, teaching, and patient care. No true humanitarian would want to see funds for medical research cut off altogether—or reduced too drastically—but there is a desirable happy medium which should be sought.

* * *

IMAGINARY POVERTY

One of the most interesting features of the *British Medical Journal* is the Correspondence department. The British are noted as letter writers, and the doctors are no exception. The letters cover numerous subjects, and many of them contain real pearls of wisdom.

A good example is Dr. A. W. Beatson's letter in the August 6 issue. The writer's description of a condition familiar to almost everyone is so clear that it is quoted verbatim:

> There exists a common, well-defined mental aberration which I have never seen reported. The patient, who is tormented, has no insight, is not amenable to reason, and, as there are two delusional components, the condition qualifies as a psychosis. I call it Imaginary Poverty.
>
> The patient, whose finances are, in fact, extremely sound, and who spends lavishly on luxuries, believes he cannot afford necessities. The second delusional aspect is an implied belief that life on this earth will continue indefinitely, and no capital must be realized for fear of compromising the security of this interminable future. The malady can afflict, of course, only the well-to-do, but is not confined to any one social stratum; incidence increases with age, and female cases predominate, though they are probably not more often afflicted than would be expected from their preponderance in the older age-groups. Often there are no dependants, and at demise the State is the chief beneficiary . . .
>
> . . . In general there is a readiness to spend on material things and a reluctance to pay for services and essentials, such as a good dietary . . .
>
> The disease is to be distinguished from miserliness, or the enjoyable hoarding of riches without delusion of poverty; and from avarice and cupidity, both of which the *Concise Oxford English Dictionary* defines as "greed of gain" and in which there is no disproportion of values; parsimony, with which one associates the careful deployment of available resources; the true destitution of inevitable poverty; voluntary poverty as practised by some religions; and the fashionable poverty-**sois-disant**, or "one downmanship."

A few case histories are given, of which one will suffice:

> An intelligent spinster dying of an obscure bulbar palsy . . . knew the end was near. Her assets were in excess of £20,000, but she died disconsolate as I was unable to accede to her request for toilet-tissues "on the National Health"..

Dr. Beatson's closing sentence is referred to our readers for possible answers:

"I know of no treatment for this illness and would be interested to hear of its prevalence elsewhere."

* * *

EVANGELIST SAYS WORLD END NEAR

The title of this editorial is taken from headlines over a United Press story in the *Winston-Salem Sentinel* for August 29. Billy Graham was quoted as telling audiences in Bern and in Zurich that the end of the world is near: "Jesus Christ will come soon and all of us should get ready."

It may seem out of place for a medical journal to comment on this story, but such statements may seriously disturb some emotionally unstable persons. Children are especially apt to be alarmed by the thought of an impending "Judgment Day." Doubtless many older people can recall having been frightened by the warning that the world might end within the very near future. And some adults as well are and have been upset by similar prophecies.

Some of these immature people of all ages may become so mentally upset as to require medical advice. The physicians called on to soothe the victims of such fears may find help from the very same Gospel chapters that are quoted by the modern prophets. For example, Matthew 24:11 declares: "And many false prophets shall rise and deceive many." Certainly, during

this century—and longer—numerous well meaning but false prophets have deceived many about the nearness of Doomsday. And verse 26 of the same chapter asserts: "But of that day and hour knoweth no man, no, not the angels of heaven, but my Father only."

Is it not a little presumptuous for any mortal to claim to know more than the angels of heaven?

* * *

PROJECT HOPE

Recently, as all readers of newspapers know, the nation's drug manufacturers have been severely criticized by the Kefauver Committee and other self-appointed critics. The following excerpt from a recent news release of the People-to-People Health Foundation, however, shows that they are not altogether heartless.

"Fifty-two of the nation's leading prescription drug manufacturers have contributed in excess of $780,000 in products and cash to Project HOPE, according to Dr. William B. Walsh, president of the People-to-People Health Foundations, sponsor of the Project. Over $100,000 of the companies' contributions were in cash. Product values were computed according to manufacturers' wholesale prices.

"A part of President Eisenhower's People-to-People program, Project HOPE will send a 15,000 ton hospital ship, the SS HOPE I, to Southeast Asia on September 22. Staffed with American doctors, nurses, and medical technicians, the floating medical center will bring modern medical knowledge and techniques to the medical and health professions of newly developing countries throughout the world.

" 'As a non-government program, Project HOPE could only succeed with the cooperation and backing of all segments of American society,' Dr. Walsh said. 'The response of the American drug industry, many other industries, businesses, and groups, American labor, and the American public is proof that our confidence in the conscience of American was warranted.' "

BLUE SHIELD AND THE NEW CHALLENGE

The American doctor's eternal struggle to preserve his professional freedom is now being waged in a new arena. Ten years ago, the big question was whether medicine could develop a viable prepayment program by its own voluntary effort, aided by labor, management and local community leaders. The alternative then was the threat of compulsory health insurance, governmentally operated and controlled.

The product of our initiative—and of the people's tremendous response—is the vast Blue Shield - Blue Cross complex, supplemented by a tremendous expansion of the insurance industry's effort in this field.

Both the medically - sponsored nonprofit plans and the commercial insurance programs are based upon the traditional pattern of free choice of physician, fee-for-service, and the private relationship of patient and doctor.

In some segments of our economy today, both labor and management are showing a lively interest in providing medical care through a "closed panel" program, in which free choice would be limited, fee-for-service would be replaced by salaries or capitation payments, and the direct personal responsibility of the physician would be subordinated by collective controls.

The American Medical Association has acknowledged the legitimacy of these alternative programs and the right of the patient to choose the pattern or plan through which he wishes to prepay his medical care. This is realism.

But it is also realistic for us physicians to realize that ultimately we can preserve our traditional pattern of medical service only if our patients find that it meets their vital needs better than any other program.

Our own Blue Shield Plans offer us the best—and only—instrument through which we can control the economy of medicine and determine the shape of medical practice in the future.

But Blue Shield is *only* an instrument. The understanding, vision and leadership required to perfect this instrument—so that it will serve satisfactorily the needs of our patients—must come from us, acting through our county, state and national medical societies.

President's Message

The Medical Issue in Politics

Tuesday, November 8, being only a few days away, it is most important that we in medicine re-evaluate our stake, as well as the medical stake of the American people, in the upcoming election. The issues, party-wise as pertain to medical care and the profession of medicine were clearly delineated in the first Kennedy-Nixon national television debate.

Mr. Nixon's expressed views supported a type of federal medical aid legislation more liberal than the currently passed "Kerr Bill," which is as yet unimplemented in this state. However, the Nixon type of proposed federal medical aid although considerably expensive tax-wise, does embody the principles of prepayment insurance, optional participation, free enterprise medicine, with emphasis on state as opposed to federal control.

Mr. Kennedy emphatically reiterated his stand for total medical care for the recipients of Social Security benefits. The Anderson amendment to the "Kerr Bill", as he proposes, embodies legislation administered by the federal government under the present federal Social Security system. One reason advanced by Mr. Kennedy for his support of this type legislation was that it would not increase the federal taxload. When asked about medical care for the millions of elder citizens not now under Social Security, he replied that this legislation was offered as an amendment to the "Kerr" general federal medical aid bill then currently before the Senate. This implied Mr. Kennedy's support, if not approval, of the expensive "Kerr type" of legislation in addition to federally administered "Forand type" of legislation. Mr. Kennedy's worries over the burden of taxation are inconsistent with his means to achieve an end.

Let us analyze Mr. Kennedy's position as outlined above. Obviously, his position on medical care supports his avowed purpose of expanding the functions of the federal government at the expense of state and local government. He is dedicated to the principle that the provision of medical care is a function of the federal government. Mr. Kennedy proposes to finance this federal medical care program by increased Social Security taxation, one half of which is exacted from the employer. Thus is evidenced another of Mr. Kennedy's cardinal principles, the redistribution of national wealth by taxation.

Now we should return to our major premise, that he who votes also rules. The past three or four decades of the twentieth century have produced rapid and far-reaching changes in the expectations and anticipations of both citizens and federal government regarding medical care and the organization and administrative methodology of medical services. The advent and rapid progress of the idea of prepaid hospital and medical care insurance, along with the emergence of identifiable, closely bonded groups within society—that is, labor and labor unions, veterans, armed services dependents, federal employees, recipients of Social Security, Senior Citizens, and so forth—has done much to alter the structure and methodology of administering medical care. In this fertile field of rapid change and turmoil, politicians and political parties have found a new bonanza for beguiling voters.

Medicine, that intangible commodity so vital to the health and well-being of our Nation, has been thrown into the game of politics through no choice of the profession. Practitioners of medicine now have a new challenge and a new obligation. It must be and is Medicine's duty to enter vigorously into this new aspect of medicine in politics in order to insure for the people of America continuation of the high quality of medical care to which they are entitled and accustomed. We can on longer stand idly by while politicians and their allies determine the future of medical care which is so vital to our people. Political medicine is bad medicine—bad for the patient, bad for the doctor, bad for the nation.

I strongly urge every doctor in this state and in this nation to become participants in the body politic. Register and vote, yourself; insist that your immediate family vote; make sure your employees are registered and have an intelligent insight into the issues at stake; identify yourself clearly, but with reason, with the national and

local candidates who support those principles which are productive of the best care for the people of this country; contribute both financial assistance and your personal time and influence to the campaigns of your chosen candidates.

No group identifiable in American society has the potential power to influence political decisions as do doctors of medicine in their daily contacts with individual patients. A remark here, a comment there, the influence and persuasion of a well informed wife, a few minutes spent daily in persuasive discussion with influential patients—this is an opportunity to wield more political influence, to the betterment of mankind, than all the work of all of the fully employed professional politicians.

Remember
HE WHO VOTES RULES HIM WHO DOES NOT VOTE

AMOS N. JOHNSON, M.D.

BULLETIN BOARD

COMING MEETINGS

State

University of North Carolina School of Medicine, six-week postgraduate courses—Memorial Mission Hospital, Asheville, beginning October 4; Grace Hospital Nurses Home and Mimosa Golf Club, Morganton, beginning October 5.

Mecklenburg County Chapter of the North Carolina Academy of General Practice, postgraduate seminar with round table discussion—Hotel Charlotte, Charlotte, November 3.

Duke University postgraduate medical seminar cruise to the West Indies—November 9-18.

Raleigh Academy of Medicine, Twelfth Annual Medical and Surgical Symposium—Sir Walter Hotel, Raleigh, October 27.

North Carolina Pediatric Society, Annual Meeting—Greensboro, November 11-12.

Ninth Annual Gaston Memorial Hospital Symposium—Gastonia, November 17.

University of North Carolina School of Medicine Symposium—Chapel Hill, November 17-18.

Western North Carolina Regional Seminar on the Care of the Severely Disabled, sponsored by the North Carolina Society for Crippled Children and Adults—Memorial Mission Hospital, Asheville, Novenber 3.

North Carolina Academy of General Practice, Annual Meeting—Carolina Hotel, Pinehurst, November 27-30.

Regional and National

Southern Chapter, American College of Chest Physicians, Seventeenth Annual Meeting—Statler-Hilton Hotel, St. Louis, Missouri, October 30-31.

Southern Medical Association Annual Meeting—St. Louis, Missouri, October 31-November 3.

Symposium on Pyelonephritis, held in conjunction with the annual meeting of the Southern Medical Association—St. Louis, November 2.

Annual Conference on Electrical Techniques in Medicine and Biology—Sheraton-Park Hotel, Washington, D. C., October 31-November 2. (Address Lewis Winner, 152 Westt 42nd Street, New York, N. Y., for further information.)

American Medical Writers' Association—Morrison Hotel, Chicago, November 18-19.

Southeastern Region, College of American Pathologists and the Virginia Society of Pathologists—John Marshall Hotel, Richmond, November 25-26.

Emory University Postgraduate Course in Ophthalmic Surgery—Grady Memorial Hospital, Atlanta, Georgia, December 1-2.

Symposium on Urology for Practicing Physicians—University of Virginia School of Medicine,

Southern Surgical Association, Annual Meeting—Boca Raton, Florida, December 6-8.

International Clinical Postgraduate Program, University of California Extension Division—Mexico City, Acapulco, Guadalajara, January 9-20. (Address requests for information to Thomas H. Sternberg, Assistant Dean for Postgraduate Medical Education, University of California Medical Center, Los Angeles 24.

NEW MEMBERS OF THE STATE SOCIETY

The following physicians joined the Medical Society of the State of North Carolina during the month of September, 1960:

Dr. Cecil L. Barrier, Edward's Clinic (Toluca), Lawndale; Dr. Joseph Jethro Allen, Box 707, Warrenton; Dr. J. Malcombe McDonald, Champion Paper & Fibre Company, Canton, Dr. Robert Grant, Waynesville; Dr. William Edmund Lassiter, 232 Hayes Road, Chapel Hill; Dr. William Brevard Blythe, 211 McCauley Street, Chapel Hill; Dr. Joseph Lawton Smith, Duke University Medical Center, Durahm.

Dr. Jesse Graham Smith, Jr., 1020 Sycamore Street, Durham; Dr. George Piercy Vennart, Dept. of Pathology, UNC, Chapel Hill; Dr. Benjamin Earl Britt, 1009 Stancil Drive, Raleigh; Dr. Odell C. Kimbrell, 226 Bryan Building, Raleigh; Dr. John Richard Taylor, Box 289, Enka; Dr. Robert Tillman Chambers, 54 Salem Street, Thomasville; Dr. Clifford Newton Edwards, Bowman Gray, Winston-Salem; Dr. William Burns Jones, Jr., S. Main Street, Warrenton; Dr. Charles Jefferson Wilson, Spruce Street, Spruce Pine.

NEWS ITEMS FROM THE UNIVERSITY OF NORTH CAROLINA SHOOL OF MEDICINE

Two postgraduate courses in medicine, sponsored by the University of North Carolina School of Medi-

cine, will begin in October in Asheville and Morganton.

The courses will consist of two lectures one day a week over a six-week period.

The Asheville course, which begins October 4, is co-sponsored by the Buncombe County Medical Society and the Morganton course, which begins October 5, is co-sponsored by the Burke County Medical Society.

All Asheville lectures will be given in the Buncombe County Medical Society Library at Memorial Mission Hospital at 5 P.M. and 7:15 P.M.

The afternoon Morganton lectures will be given at the Nurses' Home of Grace Hospital at 4:30 P.M. The 7:30 P.M. lectures will be given at the Mimosa Golf Club.

The lecturers for these courses, in order of their appearance are: Dr. Louis Krause, University of Maryland School of Medicine; Dr. Albert Mendeloff, Johns Hopkins School of Medicine; Dr. Fred Ellis and Dr. Dan Martin, both of the University of North Carolina School of Medicine; Dr. Ivan Brown, Duke University School of Medicine; Dr. Eleanor Easley, University of North Carolina School of Medicine; Dr. James Hughes, University of Tennessee School of Medicine.

Both courses are acceptable for credit by the American Academy of General Practice for the number of hours attended by the individual physician.

The first year class of the University of North Carolina School of Medicine is composed of 69 students representing one third, or 33, of the state's 100 counties.

Of the entire first year class, a total of 57 students took their pre-medical education at colleges in this state; and 39 of them attended the University of North Carolina. The remaining 12 students, including North Carolina residents, took their pre-medical education at schools outside of the state.

The names of three new faculty members at the University of North Carolina School of Medicine were announced recently by Chancellor William B. Aycock following approval by the UNC Board of Trustees.

Their names and the institutions from which they come are as follows: Edward Glassman, assistant professor in biochemistry and nutrition, City of Hope Medical Center, Duarte, California; George P. Vennant, associate professor in pathology, Columbia University; Paul A. Obrist, assistant professor in psychiatry, Fels Research Institute, Antioch, Ohio.

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A new research laboratory primarily in a unique colony of hemophilic dogs, the only such colony in the world, was dedicated by the University of North Carolina School of Medicine, Sunday, Sept. 25.

The new Francis Owen Blood Research Laboratory for the study of abnormalities of the blood, was dedicated by the U. N. C. School of Medicine on Sunday, September 25, Chapel Hill at the University Lake. The new laboratory a part of the Medical School's Deparament of Pathology, will be used primarily to house and study the colony of hemophilic dogs.

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District 12 of the University of North Carolina Medical Alumni Association met at the Greensboro Country Club in Greensboro on Tuesday, Sept.20.

This district is composed of Guilford, Randolph and Rockingham Counties. The District chairman, Dr. Thomas A. Henson of Greensboro, presided.

Dr. W. Reece Berryhill, dean of the School of Medicine, discussed the affairs of the Medical School. Brief talks were made by Mr. Paul Schenck, President of the Medical Foundation of N. C., Inc. and Dr. John Rhodes, President of the U. N. C. Medical Alumni Association.

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Some 100 Tar Heel doctors, coaches, trainers, and other interested persons attended a one-day seminar at the University of North Carolina on September 21 to hear lectures on the prevention and management of athletic injuries.

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The University of North Carolina School of Medicine's Fourth Annual Symposium will be held at Memorial Hospital in Chapel Hill on November 17 and 18.

This course in Gastroenterology will feature small gronp teaching and panel discussions in studying diseases causing primary or secondary disturbances of digestive tract functions.

The Symposium will be staffed by the division of Gastroenterology and the department of Surgery of the University of North Carolina School of Medicine, and guest participants.

The Symposium is tuition free.

News Notes from the Bowman Gray School of Medicine of Wake Forest College

Two of four exhibits submitted by the Department of Pathology won national awards at the combined annual meeting of the American Society of Clinical Pathologists, College of American Pathologists, and the Inter-Society Cytology Council. The meeting was held from September 23 to October 2 at Chicago, Illinois.

A silver award in the original exhibit classification went to Thomas B. Clarkson, Jr., D. V. M., associate professor of experimental medicine; Hugh B. Lofland, Ph. D., assistant professor of biochemistry; R. W. Prichard, M. D. assistant professor of Pathology; and Martin G. Netsky, M. D., professor of neurology and neuropathology for their presentation of "Spontaneous Atherosclerosis in Pigeons."

Dr. Robert P. Morehead's exhibit on "Tumors of Salivary Glands" won a bronze award in the educational exhibit category. Dr. Morehead is chairman of the Department of Pathology.

Eighty-eight pre-medical students from Wake Forest College toured Bowman Gray School of Medicine Friday, September 23, as a part of the school's first Wake Forest Day. They saw exhibits set up by various medical school departments and the Bowman Gray chapter of the Student American Medical Association.

In the spring of 1959, the medical school and the Alpha Epsilon Delta chapter at Wake Forest College sponored an all-college day in which students from colleges and universities throughout the state were invited to hear talks, see exhibits and medical school facilities.

The plan now is to conduct on alternate years a Wake Forest Day, inviting Wake Forest students only, and an all-college day.

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J. D. Alexander, Jr. has joined the medical school staff as director of the Office of Information. Mr. Alexander, a staff reporter for the Winston-Salem *Journal* and *Sentinel* for a year and a half, began his duties in mid-September.

* * * * *

Dr. John R. Ausband, associate professor of Otolaryngology, participated in the September 14 postgraduate course of the North and South Carolina E. E. N. T. Society held at the King Cotton Hotel in Greensboro. His subject was "Some Effects on the Lung Produced by Bronchographic Media."

Drs. Frank R. Lock and C. Hampton Mauzy, professors of obstetrics and gynecology, attended the annual meeting of the American Association of Obstetricians and Gynecologists at Hot Springs, Virginia, September 8, 9, and 10. Dr. Lock presented "Anomalies Following Rubella Infection During Pregnancy."

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Dr. Emery C. Miller, Jr., assistant professor of internal medicine, read a paper before the third annual Cape Fear Valley Hospital Medical Symposium September 15 at Fayetteville, on "Current Aspects of Diabetic Management."

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Dr. Robert P. Morehead, chairman and professor of the Department of Pathology, and Dr. Robert E. Jones, Jr., an intern in pathology, presented a paper entitled "Intermediate Tumors of Salivary Glands" September 27 at an assembly of the American Society of Clinical Pathologists at Chicago, Illinois

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Dr. William A. Wolff, associate professor of biochemistry and toxicology, participated September 26 in the "Military Workshop for the Promotion of Traffic Safety" at Fort Bragg. Dr. Wolff assisted Winston-Salem Police Chief James I. Waller in a breath analysis demonstration and reported on the chemical test program in Winston-Salem and Forsyth County.

* * *

Dr. Julius A. Howell, instructor in surgery (plastic surgery), spoke September 25 and 26 at the North Carolina Dental Society meeting at Winston-Salem. His topics were "Intra-oral Carcinoma: Diagnosis and Treatment" and "Benign Intra-oral Lesions."

Coming Events

Oct. 3, 7:30 p.m., Clinical Amphitheater: Herbert M. Vann Memorial Lecture by Dr. Louis G. Welt, Professor of Medicine at the University of North Carolina School of Medicine on "Observations in Experimental Potassium Depletion."

Oct. 10, 7:30 p.m., Clinical Amphitheater: Bowman Gray Medical Society Program with Dr. John A. Oates, Jr. of the Section on Experimental Therapeutics, National Heart Institute, National Institutes of Health, speaking on "Inhibition of Amine Biosynthesis in Man, A New Access to Therapy of Hypertension."

Oct. 17, 7:30 p.m., Clinical Amphitheater: Bowman Gray Medical Society program with Dr. Wayne Rundles, Professor of Medicine (Hematology) at Duke University School of Medicine, speaking on "Newer Nitrogen Mustard Compounds in Cancer Chemotherapy."

Oct. 24, 7:30 p.m., Clinical Amphitheater: Program by the Committee on Medical Education in National Defense with Dr. Joseph Shaeffer, Director of Medical Education, Santa Rosa Hospital, San Antonio, Texas, speaking on "Principles in the Management of Mass Injuries."

Professional Group on Medical Electronics

North Carolina Chapter

A North Carolina Chapter of the Professional Group on Medical Electronics of the Institute of Radio Engineers has been organized. The function of this group is to bring together engineers and persons functioning in the medical sciences who have common interests. It is expected that this association will further the friendship between these two groups and will bring about further development in medical electronic research.

Any person in North Carolina who fits either of these categories and has an interest in medical electronics is invited to join this group.

The first meeting of the 1960-1961 year will be held at the cafeteria of the Bowman Gray School of Medicine (N. C. Baptist Hospital) on September 23, 1960. A program interesting to both groups is planned. All interested persons are invited to this meeting whether members or not.

Dr. C. C. Lupton of Greensboro is president of the chapter, and Dr. Jesse Meredith of Winston-Salem is chairman of the Liaison Committee.

Southern Medical Association Symposium on Pyelonephritis

Six of the nation's leading experts on diagnosis and treatment of pyelonephritis will participate in a special Pyelonephritis Symposium to be held in conjunction with the annual meeting of the Southern Medical Association in St. Louis on November 2, 1960.

The Symposium, sponsored jointly by the Southern Medical Association and the Eaton Laboratories Division of The Norwich Pharmacal Company, will feature a round-table panel discussion moderated by Dr. George Schreiner, associate professor of medicine, Georgetown University, Washington, D. C.

Among the participants will be Dr. Fred K. Garvey, professor of urology, Bowman Gray School of Medicine, Winston-Salem.

American Medical Association

The fourteenth clinical meeting of the American Medical Association in Washington, November 28-December 1, will offer a well-rounded, stimulating scientific program designed to interest both family physicians and specialists. The symposia, presentations, and discussions will stress the theme, "New Developments in Old Diseases and Old Developments in New Diseases."

Participants will include proponents of both sides where different views exist on the management of a disease or medical condition. For example, should tonsils be removed when mildly involved or only when they are badly diseased?

The patient's side will also be heard on one symposium. Clarence B. Randall, an industrialist and special assistant to President Eisenhower, will talk on coronary disease from the patient's viewpoint.

The Problem of Management of Nodules, always perplexing for both the specialist and the family physician, will be discussed by three panels concerned with breast nodules, the solitary pulmonary nodule, and nodules of the neck.

Another panel will discuss Recent Advances of the Use of Antibiotics and Steroids, and additional symposia will cover areas in obstetrics-gynecology, pediatrics, edema, cirrhosis and liver diseases, renal problems, osteoporosis, thyrotoxicosis, eye problems, orthopedic surgery and trauma, clinical nutrition and bronchopulmonic disease.

The entire scientific program of the Clinical meeting appears in the October 22 issue of the **Journal of the American Medical Association.**

* * *

The Committee on Cosmetics of the American Medical Association in cooperation with the American Association for the Advancement of Science will present a one-day symposium entitled "The Scientist's Contribution to the Safe Use of Cosmetics." This program has been arranged at the invitation of the A.A.A.S. and will be presented before the Pharmacy (NP) Section at the Association's one hundred twenty-seventh annual meeting in New York City on December 29, 1960.

The symposium will be divided into afternoon and evening sessions and will include panel discussions at each session.

Further information on the symposium may be obtained by writing to Dr. Joseph B. Jerome, Acting Secretary, Committee on Cosmetics, American Medical Association, 535 No. Dearborn Street, Chicago 10, Illinois.

American College of Chest Physicians

The American College of Chest Physicians will hold its annual Interim Session at the Shoreham Hotel in Washington, D. C. this November. The scientific sessions will be held on Saturday and Sunday, November 26 and 27. Monday, November 28, will be reserved for administrative sessions. Dr. M. Jay Flipse, Miami, Florida, president of the College, will preside.

Dr. Joseph W. Peabody, Jr., Washington, D.C., and his committee, have arranged a scientific program of exceptional interest including symposiums on Congenital Bronchopulmonary Disorders, the role of Steroid Therapy in Chest Diseases, and Current Therapeutic Issues.

A highlight of the program will be the Fireside Conferences on Sunday evening, November 27. In addition, there will be three round table luncheon discussions on both Saturday and on Sunday. These will feature prominent speakers discussing various aspects of heart and lung diseases.

American College of Surgeons

Members of the medical profession are invited to attend an instructive three-day Sectional Meeting of the American College of Surgeons being held in Birmingham, Alabama, January 16-18, 1961. Headquarters hotel for the meeting will be the Dinkler-Tutwiler.

Dr. Arthur I. Chenoweth, associate professor, Medical College of Alabama, chairman, and his Advisory Committee on Local Arrangements, have planned a program of interest to general surgeons and to specialists.

The afternoon panel discussion is on urinary incontinence in the female and will be moderated by Dr. Conrad G. Collins, New Orleans. Collaborators are LAMAN A. GRAY, Louisville, VAN SCOTT, Birmingham, JOHN C. WEED, New Orleans, and HAROLD L. GAINEY, Kansas City.

Additional information about program and registration may be obtained by writing to: William E. Adams, M.D., Secretary American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

American Psychiatric Association

Philadelphia State Hospital on October 4 was designated by the American Psychiatric Association as the National Training Center for Remotivation—an unusual group discussion technique which is aiding in the rehabilitation of mental patients.

Dr. Robert S. Garber, chairman of the A.P.A.'s Committee on Remotivation, said the official designation was a logical one since the local hospital has been the headquaters for the program from its inception there in 1955.

Dr. Garber noted that the Remotivation technique is basically a group discussion program in which psychiatric aides work with a small number of mental patients to help stimulate—through planned conversation sessions—a desire to return to reality. Although not classed as therapy, the discussion technique has been credited as a significant factor in the removal of communication barriers which work against the curative efforts of psychiatrists.

He pointed out that the Remotivation program, which is supported by funds from the Smith Kline & French Foundation, has been introduced to some 600 nurses and aides in 35 hospitals by the Philadelphia training teams. These nurses and aids in turn have carried the program to approximately 2200 other psychiatric personnel in about 100 additional hospitals.

"The enormous success of and increasing interest in Remotivation, due largely to the enthusiastic support and development of the program by the Philadelphia group, has now made it necessary to establish regional training centers for a more practical application of instruction in the technique," Dr. Garber said.

So far, regional training centers have been established at the Central State Hospital in Norman, Okla.; Western State Hospital in Staunton, Va., and the Essex County Overbrook Hospital in Cedar Grove, N. J.

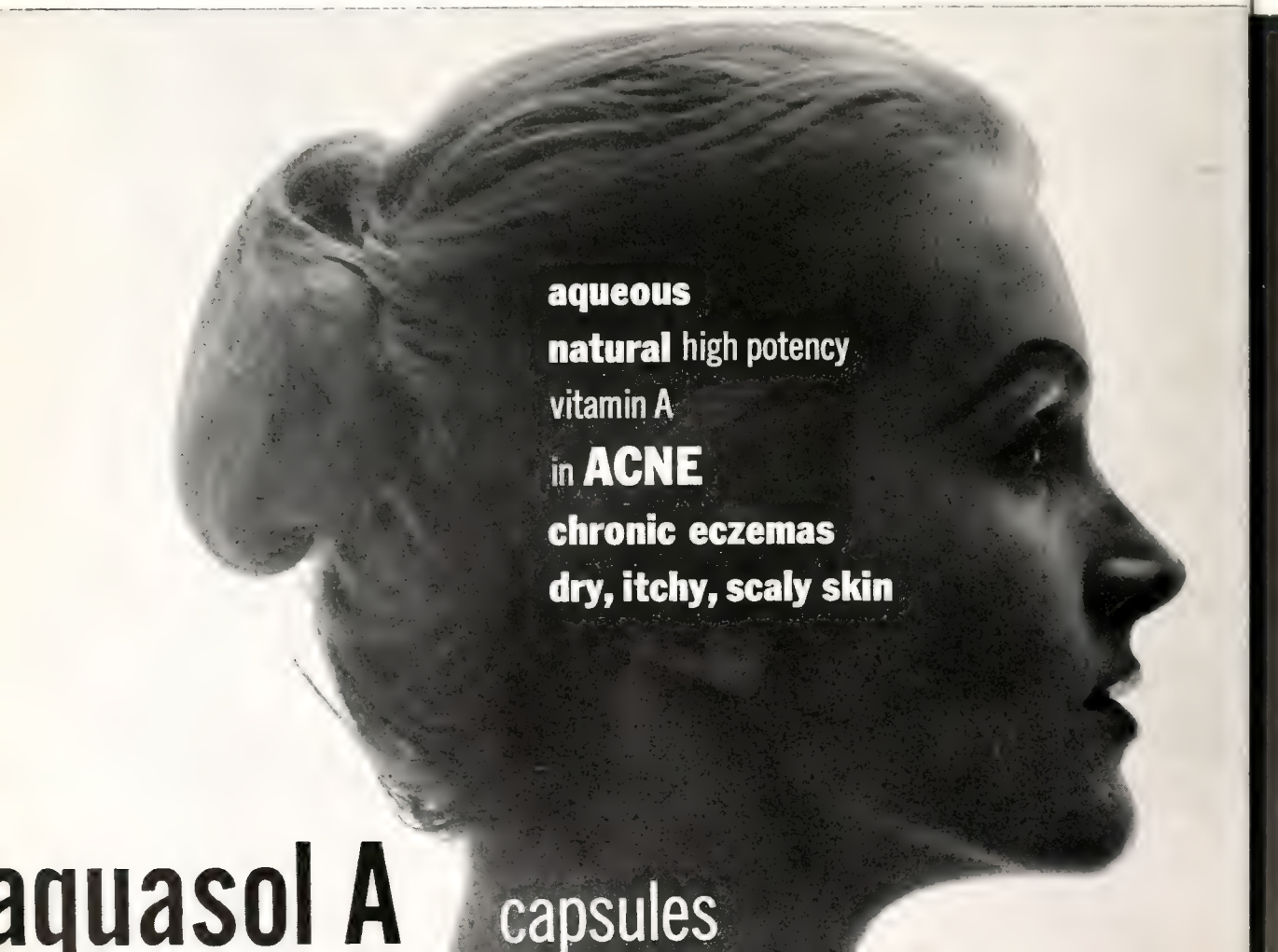
Dr. Garber paid particular tribute to Dr. Eugene L. Sielke, superintendent of the Philadelphia State Hospital, and Miss Helen Edgar, director of nurses, for their leadership of the program. He also cited the work of Mrs. Mertell Cameron, R. N., and Walter Pullinger, psychiatric aide, who made up the original Remotivation training team for the hospital.

"With the designation of Philadelphia State Hospital as the National Training Center for Remotivation, we feel that the project will forever be closely indentified with its birthplace and that this recognition will serve to remind us all of the outstanding contributions the hospital has made to a better understanding of mental illness," Dr. Garber added.

Association of American Medical Colleges

The Association of American Medical Colleges has begun seeking applicants for an unusual foreign fellowship program which gives future American doctors opportunity to study medicine in remote areas of the world.

The program, begun last year as the Smith Kline & French Foreign Fellowships, enables selected medical students, who have finished either their third or fourth year of training, to benefit from unusual clinical experiences and to practice preven-



tive medicine at outpost facilities in greatly differing societies and cultures.

Dr. Ward Darley, executive director of the A. A. M. C., said application forms and brochures detailing complete information on the SK&F Foreign Fellowships have now been mailed to deans of all U. S. medical schools.

Veterans Administration

Appointment of Dr. Robert I. McClaughry of the National Academy of Sciences-National Research Council as director of medical education service for the Veterans Administration has been announced by the VA.

In his new post at VA Central Office in Washington, D. C., Dr. McClaughry will coordinate programs making a major contribution to the trained medical manpower pool of the nation. One out of each three new physicians and one of each 10 professional nurses being produced by the United States receive part of their education in VA hospitals.

Appointment of Dr. Samuel C. Kaim as chief of psychiatric research for the Veterans Administration was announced by the agency recently.

Dr. Kaim comes to VA Central Office in Washington, D. C., from the Coral Gables, Florida, VA hospital, where he was chief of inpatient psychiatry and neurology. He also was clinical assistant professor of neurology at the University of Miami. In his new post, he will coordinate the VA's largescale cooperative research on newer drugs in the treatment of mental illness, as well as the many individual studies by VA personnel in the psychiatric field.

The three top awards for scientific exhibits at the Third International Congress of Physical Medicine and Rehabilitation, held in Washington, D. C., August 22-26, went to Veterans Administrations psysicians.

Among the winners was Dr. Harry T. Zankel, chief of physical medicine and rehabilitation at the Durham, VA hospital, who won the Bronze Medal, for his exhibit, "Stimulation Assistive Exercise in Hemiplegia."

U. S. Department of Health, Education and Welfare

The proceedings of the Symposium on Phenomena of the Tumor Viruses have been published by the National Cancer Institute of the Public Health Service, U. S. Department of Health, Education, and Welfare. Sponsored by the Virology and Rickettsiology Study Section of the National Institutes of Health, the symposium was held March 25 and 26, 1960, in New York.

The symposium consisted of reports and panel discussions on several phases of research in viruses

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and their relation to tumors. The proceedings are published as National Cancer Institute Monograph No. 4.

Dr. Joseph W. Beard of Duke University introduced and edited the symposium. He also took part in presenting reviews of research on the virus of avian leukemia. Several papers presented findings in studies with the polyoma virus. This virus causes some 23 forms of cancer in mice and also produces tumors in rats and hamsters. Other papers presented discussions on the properties of the tumor viruses, host response, ultrastructure, and contributions of tissue culture to the field of tumor viruses.

National Cancer Institute Monograph No. 4 is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25. D. C The price for a single copy is $3.00.

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Four national courses to train medical and health personnel for emergency services will be held during the current fiscal year by the U. S. Public Health Service and the Office of Civil and Defense Mobilization.

Three of the courses will be for hospital administrators, registered nurses, and environmental health personnel. The fourth is a repetition of basic health mobilization training for physicians and health-related professions which was introduced to the public last April, May, and June.

Tuition and housing are provided without cost to students and approximately one-half the necessary travel expenses can be reimbursed through OCDM student training expense funds. Enrollments are limited to permit proper student-faculty ratios. Applications should be made through State Civil Defense Directors.

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The proceedings of the Conference on Experimental Clinical Cancer Chemotherapy have been published by the National Cancer Institute of the Public Health Service, U. S. Department of Health, Education, and Welfare. The Conference assembled in Washington, D. C., on November 11 and 12, 1959, and was sponsored by the Institute's Cancer Chemotherapy National Service Center.

Published as National Cancer Institute Monograph No. 3, the proceedings consist chiefly of panel discussions on such subjects as: seeking new structures of chemotherapeutic agents; design and conduct of clinical investigations; use of drugs in conjunction with surgical treatment for cancer; and chemotherapy of specific forms of malignant disease, such as leukemia, and cancer of the breast and lung.

National Cancer Institute Monograph No. 3 is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. The single copy price is $2.00.

Bahamas Conferences

Irvin M. Wechsler, executive director, has announced the following schedule for the seventh annual series of Bahamas Conferences.

Tenth Medical Conference, November 30 to December 10, 1960

Third Surgical Conference, December 28 to January 7, 1961

Conference on Hypertension, January 8 to January 14, 1961

Third Serendipity Conference, January 22 to January 28, 1961

Baxter Laboratories, Inc., Buys New Plant Site in South Carolina

Baxter Laboratories, Inc., has purchased a 47-acre tract of land near Kingstree, South Carolina, as a site for a new plant, William B. Graham, president, announced today.

When finished, the plant will employ approximately 100 people, Graham said. The facility will manufacture intravenous solutions for hospital use, blood equipment and pharmaceutical specialties.

"Psychiatric Newsreel" Released

A new "Psychiatric Newsreel," the second of film reports depicting current developments in the mental health field, has been released by Smith Kline & French Laboratories, it was reported today.

Jack Borland, director of SK&F's medical film center, said the 30-minute, sound movie is available on a free-loan basis to professional audiences at private, state and veterans mental hospitals through local representatives of the Philadelphia drug firm. The film, which depicts an unusual approach to mental health at Cassel Hospital in England, as well as innovations in Kentucky and California, also is available to the neuropsychiatric divisions of general hospitals, Borland said.

The Cassel Hospital sequence, filmed at Ham Common, Surrey, deals with a fully integrated program of therapy for mothers which permits them to bring their children with them when they are admitted to the mental hospital. According to Dr. Thomas Main, medical director at the hospital, the program was designed to treat mothers without impairing the mother-child relationship. The experiment appears to speed the process of therapy for the mothers, and initial fears that the children might be adversely affected have proved groundless, Dr. Main said.

A mobile unit which brings "psychiatric first aid" to the hill people of eastern Kentucky is the film's second sequence. The unit, operated jointly by the Eastern State Hospital, Lexington, and the State Division of Community Services, provides follow-up care for discharged mental patients, limited diagnostic and treatment services as well

as inservice training of local teachers and nurses and a public mental health education program.

The final portion of the "newsreel" depicts group therapy being used in conjunction with the rehabilitation of habitual criminals at the California Medical Facility at Vacaville. Studies under the program have shown that inmates who participated in the therapy generally have become more positive in their attitudes and have been motivate toward work and self-improvement.

The second issue of "Psychiatric Newsreel" was produced for SK&F by Ralph Lopatin Productions, Philadelphia. It was written and directed by Newton E. Meltzer. The 16 mm. film may be obtained from the Medical Film Center, Smith Kline & French Laboratories, Philadelphia, Pa., as well as from local representatives, Borland said.

BOOK REVIEWS

Experiments and Observations on the Gastric Juice and the Physiology of Digestion. By William Beaumont, M. D. 280 pages, plus 40 pages of a biographical essay. Price, $1.50. New York: Dover Publications, Inc., 1959.

Classics of Medicine and Surgery. Collected by C. N. B. Camac. 435 pages. Price, $2.25. New York: Dover Publications, Inc., 1959.

Source Book of Medical History. Compiled with notes by Logan Clendening, M. D. Price, $2.75. New York: Dover Publications, Inc., 1960.

Beaumont's original book, published in 1833, has been reproduced in fascimile. A biographical essay, "A Pioneer American Physiologist," by Sir William Osler has been added in this edition.

Camac's "Classics of Medicine and Surgery" appeared originally under the title "Epoch-making Contributions to Medicine, Surgery and the Allied Sciences." In this volume are the complete unabridged texts of 12 papers by Lister, Harvey, Auenbrugger, Laennec, Jenner, Morton, Simpson and Holmes. In addition there are biographical sketches and lists of writings by these men.

Clendening's "Source Book of Medical History" is a comprehensive survey of classical medical writings covering medical history from the Egyptian period to the discovery of the x-ray. Selections from the writings of many famous men who contributed greatly to our knowledge of medicine are presented here, a few selections giving the original papers in their entirety.

It is not the purpose of the reviewer to give a critical analysis of these classics since their value has been proven long ago. Dover Publications has done a great service in reproducing thes volumes. All of these books are unobtainable in their original printings. Now they are available in paper-back editions, printed on a good grade of papr with sewn in signatures. Best of all, these books are available at low costs which puts them in the financial reach of even medical students and house officers. These editions cannot be recommended too highly.

Mustard Plasters and Printer's Ink. By Allen Moore, M.D. 262 pages. Price, $3.50 New York: Exposition Press, 1959.

The book, which contains a foreword by author James A. **(Tales of the South Pacific)** Michener and an introduction by former Comptroller General Lindsay C. Warren, is a kaleidoscope of a country doctor's observations about people, places and things, as first recorded in his column in the **Washington** (North Carolina) **Daily News.**

In a relaxed and down-to-earth style Dr. Moore writes on subjects ranging from his foreign travels to his experiences as a rural physician, providing some "grass roots" writing that will find an enduring place on the bookshelf for repeated browsing.

A doctor since 1916, the author has written many medical articles and has been doing a column for the **Washington Daily News** since 1957. He also was editor of "The Bucks County Medical Journal" for 10 years.

New Film on Congestive Heart Failure Released

"Congestive Heart Failure" is a ten-minute 16-mm sound film in color just released by Merck Sharp & Dohme, Division of Merck & Co., Inc. The film can be obtained for showing through the Film Library of the American Medical Association, Merck Sharp & Dohme sales branches, and the MSD Film Library, Merck Sharp & Dohme, Philadelphia 1, Pennsylvania. The company also has available an illustrated brochure which contains the entire narration script of the film.

Technical advice for "Congestive Heart Failure" was furnished by Dr. William D. Stroud, professor emeritus in cardiology, Graduate School of Medicine, University of Pennsylvania. The film has the approval of the American Medical Association.

This film uses animation to acquaint the victims of this disease with the normal functions of the heart and what happens to it under stress.

The film's broad appeal to the public is based on its easy-to-understand explanation of the disease, its causes, and the remedial possibilities. The film holds out the hope that, with proper care, a patient with congestive heart failure has a good prospect of returning to a relatively normal life.

"Congestive Heart Failure" is suitable for use on television, for presentation to lay groups, nurses, medical students and pharmacists, and especially to patients suffering from the ailment. It helps to allay fear of the condition by creating a better understanding of its causes and informs the audience that medical science now can do something for victims of congestive heart failure.

In Memoriam

Abraham Hewitt Rose, M.D.

WHEREAS in the Province of God, Dr. Abraham Hewitt Rose of Smithfield, North Carolina, our brother and fellow member of the Johnston County Medical Society, has fallen asleep and passed on to give an account of his work among us, therefore be it resolved that it is the desire of his fellow members to give an expression of their love, respect and admiration for our departed brother. We recognize in him a man of worth and a friend of all; a doctor believed and trusted in a special manner by his people, having served them for the unusual period of more than fifty years; a good attendant upon the meetings of this county medical society, and an honorary member of the Medical Society of the State of North Carolina; modest and reserved in his demeanor and a lover of his profession. Therefore be it

Resolved, that our sympathy goes out to his family and his patients, and that a page in our County Society records be ascribed to his memory.

E. H. Alderman, M.D., Pres.
Watson Wharton, M.D., Sect.

Milford Hinnant, M.D.

WHEREAS in the Province of God, Dr. Milford Hinnant of Micro, North Carolina, our brother and fellow member of the Johnston County Medical Society, has fallen asleep and passed on to give an account of his work among us, therefore be it

Resolved that it is the desire of his fellow members to give an expression of their love, respect, and admiration for our departed brother. We recognize in him a man of worth and a friend of all; a doctor believed and trusted in a special manner by his people, having served them for the unusual period of more than fifty years; an honorary member of the Medical Society of the State of North Carolina; modest and reserved in his demeanor and a lover of his profession. Be it further

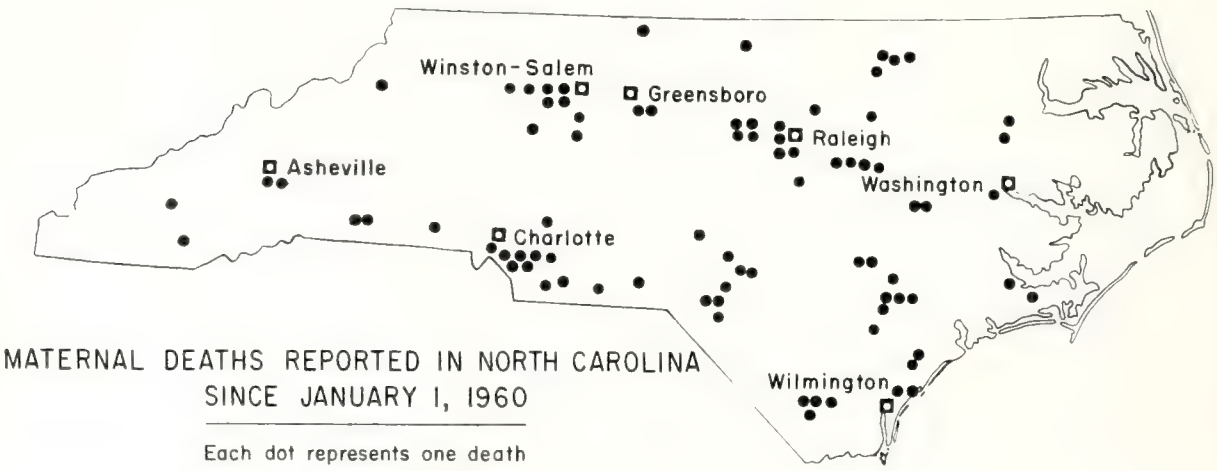
Resolved that our sympathy goes out to his family and his patients, and that a page in our County Society records be ascribed to his memory.

E. H. Alderman, M.D., Pres.
Watson Wharton, M.D., Sect.

Performed daily or regularly, exercise can bring about loss of weight, it is reported in a recent issue of **Patterns of Disease**, published by Parke, Davis & Company for the medical profession.

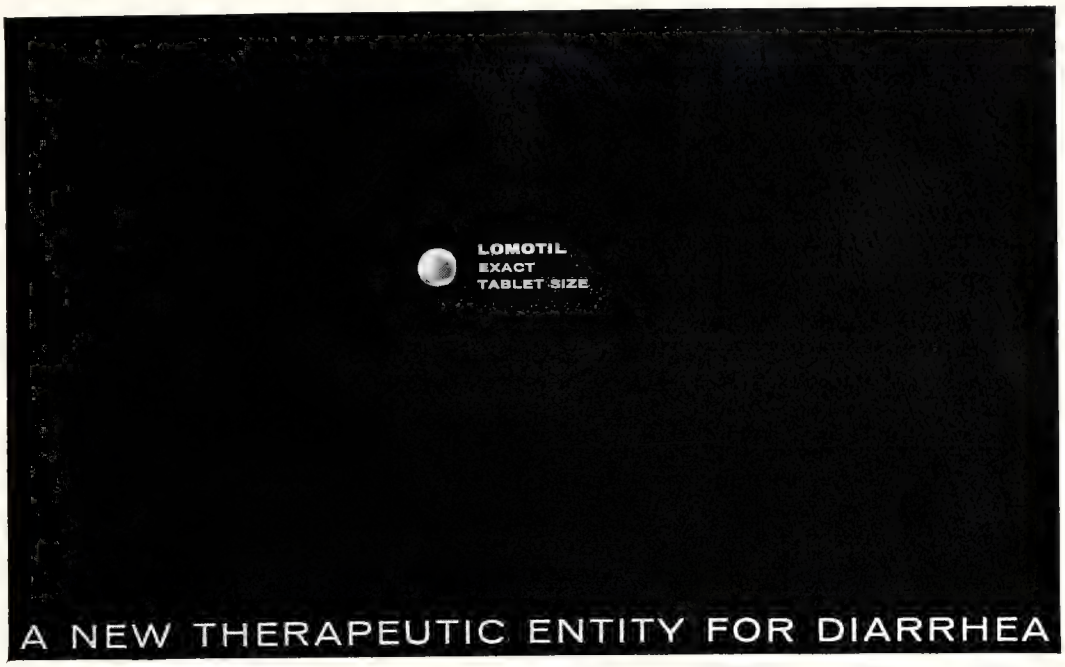
Walking for one-half hour per day can result in a weight loss of five pounds over a year. Similarly, a half hour daily of handball or squash can, over the same period, account for a 16-pound weight loss, and splitting wood, for a 26-pound loss.

Since the energy cost of exercise is proportional to body weight, the overweight person will consume more calories than the slender person performing the same exercise. For example, a person who is 20 per cent overweight will expend approximately 20 per cent more calories in walking, playing handball or squash, etc. than the normal or underweight person.



MATERNAL DEATHS REPORTED IN NORTH CAROLINA SINCE JANUARY 1, 1960

Each dot represents one death



A NEW THERAPEUTIC ENTITY FOR DIARRHEA

LOMOTIL®

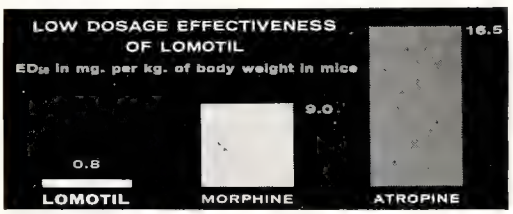
SELECTIVELY LOWERS PROPULSIVE MOTILITY

LOMOTIL represents a major advance over the opium derivatives in controlling the propulsive hypermotility occurring in diarrhea.

Precise quantitative pharmacologic studies demonstrate that Lomotil controls intestinal propulsion in approximately $\frac{1}{11}$ the dosage of morphine and $\frac{1}{20}$ the dosage of atropine and that therapeutic doses of Lomotil produce few or none of the diffuse untoward effects of these agents.

Clinical experience in 1,314 patients amply supports these findings. Even in such a severe test of antidiarrheal effectiveness as the colonic hyperactivity in patients with colectomy, Lomotil is effective in significantly slowing the fecal stream.

Whenever a paregoric-like action is indicated, Lomotil now offers positive antidiarrheal control ... with safety and greater convenience. In addition, as a nonrefillable prescription product, Lomotil offers the physician full control of his patients' medication.



EFFICACY AND SAFETY of Lomotil are indicated by its low median effective dose. As measured by inhibition of charcoal propulsion in mice, Lomotil was effective in about $\frac{1}{11}$ the dosage of morphine hydrochloride and in about $\frac{1}{20}$ the dosage of atropine sulfate.

PRECAUTION: While it is necessary to classify Lomotil as a narcotic, no instance of addiction has been encountered in patients taking therapeutic doses. The abuse liability of Lomotil is comparable with that of codeine. Patients have taken therapeutic doses of Lomotil daily for as long as 300 days without showing withdrawal symptoms, even when challenged with nalorphine.

Recommended dosages should not be exceeded.

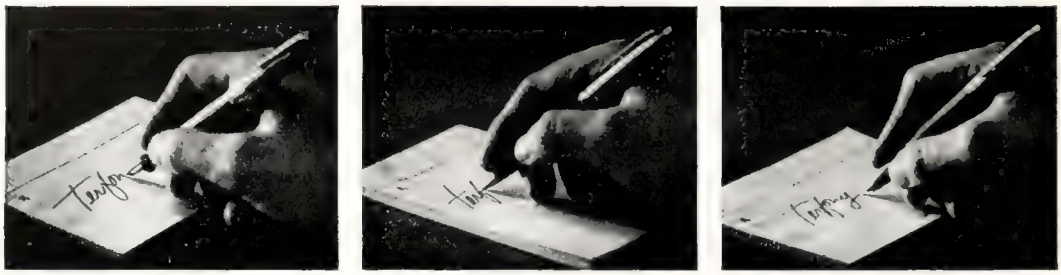
DOSAGE: The recommended initial dosage for adults is two tablets (5 mg.) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. ($\frac{1}{2400}$ gr.) of atropine sulfate to discourage deliberate overdosage.

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TERFONYL

Squibb Triple Sulfas (Trisulfapyrimidines)

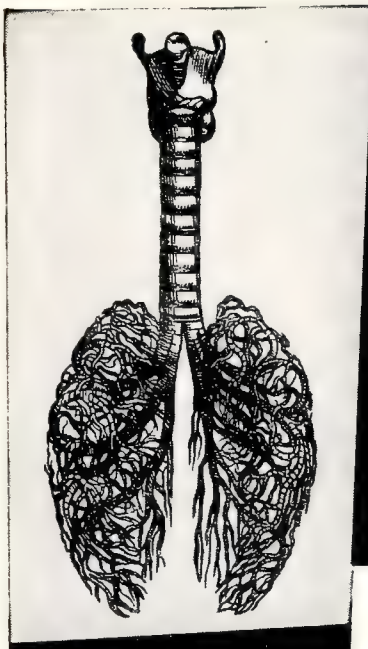
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SUPPLY: Tablets, 0.5 gm. • Suspension, raspberry flavored, 0.5 gm. per teaspoonful (5cc.).

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TABLETS (new!) and LIQUID



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SULTUSSIN simultaneously affords maximum relief from sneezing, stuffed or runny nose, cough, wheezing, malaise, slight fever, and other distressing symptoms of the severe common cold, coughs, influenza, etc.

antibacterial chemoprophylaxis • expectorant
antiallergic • bronchodilator • antispasmodic

In new raspberry flavored tablets and pleasant tasting liquid form.

	Each tablet provides:	Each teaspoonful (5 cc.) provides:
Sulfadiazine	0.083 Gm.	0.166 Gm.
Sulfamerazine	0.083 Gm.	0.166 Gm.
Sulfamethazine	0.083 Gm.	0.166 Gm.
Pyrilamine Maleate	3.125 mg.	6.25 mg.
Phenyltoloxamine Dihydrogen Citrate	3.125 mg.	6.25 mg.
Glyceryl Guaiacolate	25.0 mg.	50.0 mg.
Ephedrine Sulfate	2.5 mg.	5.0 mg.

Supplied:
Liquid in 4 ounce and pint bottles.
Tablets, bottles of 50 and 100.

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new clinical study[1] cites beneficial results in over 90% of cases in dry, itchy, scaly skin with Sardo*

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CASES	AFTER SARDO*		
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26 Dry Skin in younger patients (diabetes, etc.)	14	11	1
20 Atopic dermatitis	8	10	2
13 Actinic changes	9	4	—
10 Ichthyosis	3	4	3
Skin Conditions	Benefited	No Benefit	
20 Nummular dermatitis	19	1	
10 Neurodermatitis	10	—	



SARDO acts[1,2] to (A) lubricate and soften skin, (B) replenish natural emollient oil, (C) prevent excessive evaporation of essential moisture.

SARDO releases millions of microfine water-miscible globules to provide a soothing suspension which enhances the efficacy of your other therapy.

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1. Weissberg, G.: Clin. Med., June 1960.

2. Spoor, H. J.: N. Y. St. J. Med., Oct. 15, 1958.

**patent pending*
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for **SAMPLES** and complete reprint of Weissberg paper, please write . . .

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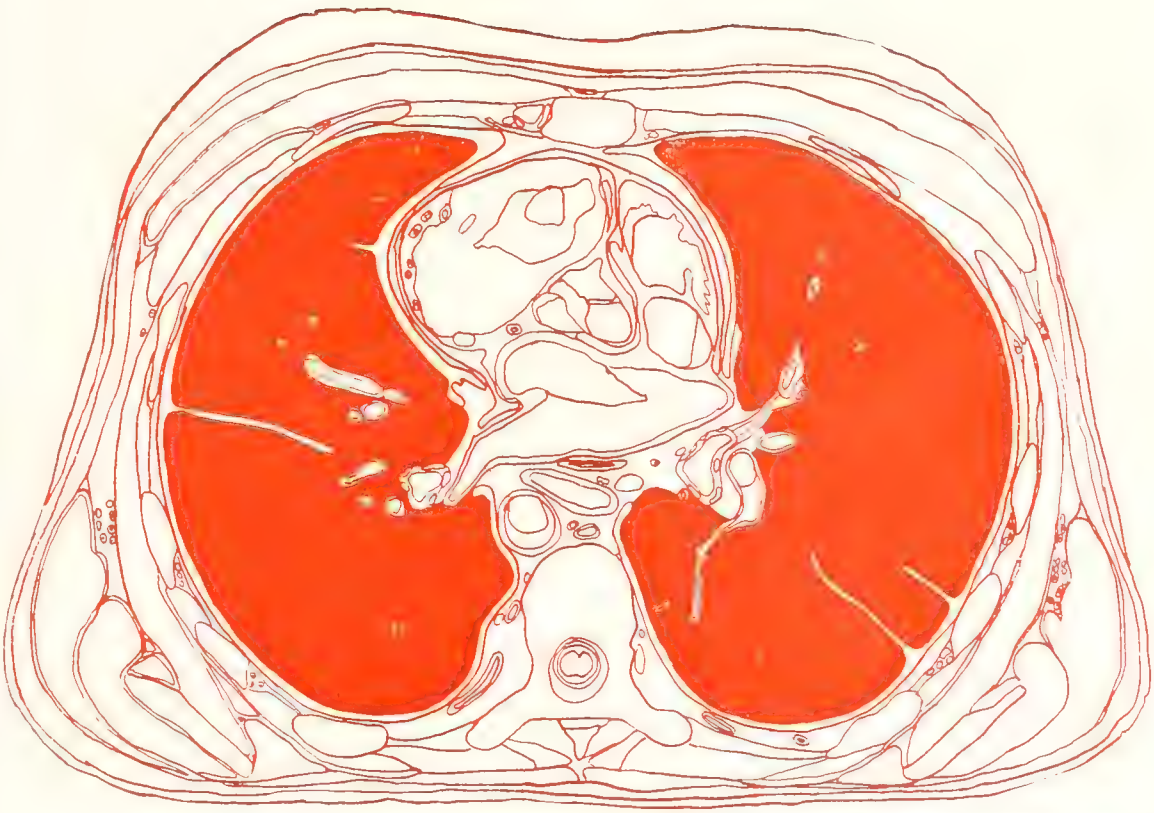
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Analgesics offer temporary relief of musculoskeletal pain, but they merely *mask* pain rather than getting at its *cause*. New Medaprin, in addition to bringing about prompt subjective improvement, promotes the *restoration of normal function* by suppressing the inflammation that *causes* the pain.

Medaprin, Upjohn's new analgesic-steroid combination, contains aspirin plus Medrol,** the corticosteroid with *the best therapeutic ratio in the steroid field.*† Instead of suffering recurrent discomfort because of the "wearing off" of analgesics, the patient on Medaprin experiences a smooth, *extended* relief and more normal mobility.

Indications: Medaprin is indicated in mild-to-moderate rheumatic and musculoskeletal conditions, including rheumatoid arthritis, deltoid bursitis, low back pain, neuralgia, synovitis, fibromyositis, osteoarthritis, low back sprain, traumatic wrist, sciatica, and "tennis elbow."

Dosage: The recommended dosage is 1 tablet q.i.d. The usual cautions and contraindications of corticotherapy should be observed.

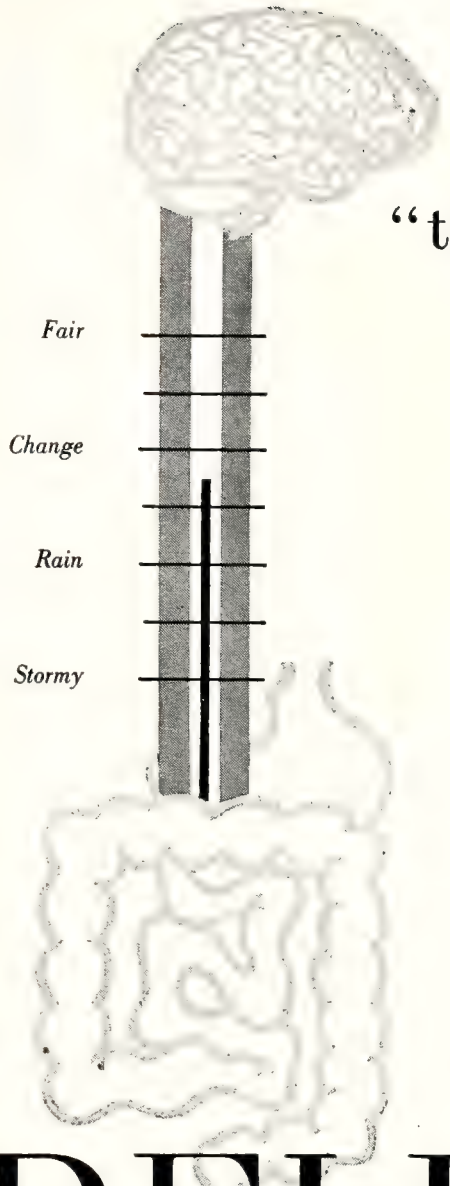
Supplied: In bottles of 100 and 500.

Formula: Each Medaprin tablet contains

- 300 mg. acetylsalicylic acid, for prompt relief of pain
- 1 mg. Medrol, to suppress the causative inflammation
- 200 mg. calcium carbonate, as buffer

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†RATIO OF DESIRED EFFECTS TO UNDESIRED EFFECTS

Upjohn



"the G-I tract is the barometer of the mind..."

Belbarb
soothes the agitated mind
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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.
2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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pHisoHex, antibacterial detergent with 3 per cent hexachlorophene, removes soil and oil better than soap — provides **continuous** degerming action when used often. pHisoHex is nonalkaline, nonirritating and hypoallergenic.

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new chemically improved penicillin which provides the highest blood levels that are obtainable with oral penicillin therapy



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With Chemipen it becomes possible as well as convenient for the physician to achieve and maintain higher blood levels—with greater speed—than those produced with comparable therapeutic doses of potassium penicillin V. In fact, Chemipen is shown to have a 2:1 superiority in producing peak blood levels over potassium penicillin V.*

Extreme solubility may contribute to the higher blood levels that are so notable with Chemipen.* Equally notable is the remarkable resistance to acid decomposition (Chemipen is stable at 37°C. at pH 2 to pH 3), which in turn makes possible the convenience of oral treatment.

And the economy for your patients will be of particular interest—Chemipen costs no more than comparable penicillin V preparations.

Dosage: Doses of 125 mg. (200,000 u.) or 250 mg. (400,000 u.), t.i.d., depending on the severity of the infection. The usual precautions must be carefully observed with Chemipen, as with all penicillins. Detailed information is available on request from the Professional Service Department.

Supply: Chemipen Tablets of 125 mg. (200,000 u.) and 250 mg. (400,000 u.), bottles of 24 tablets. Chemipen Syrup (cherry-mint flavored, nonalcoholic), 125 mg. per 5 cc., 60 cc. bottles.

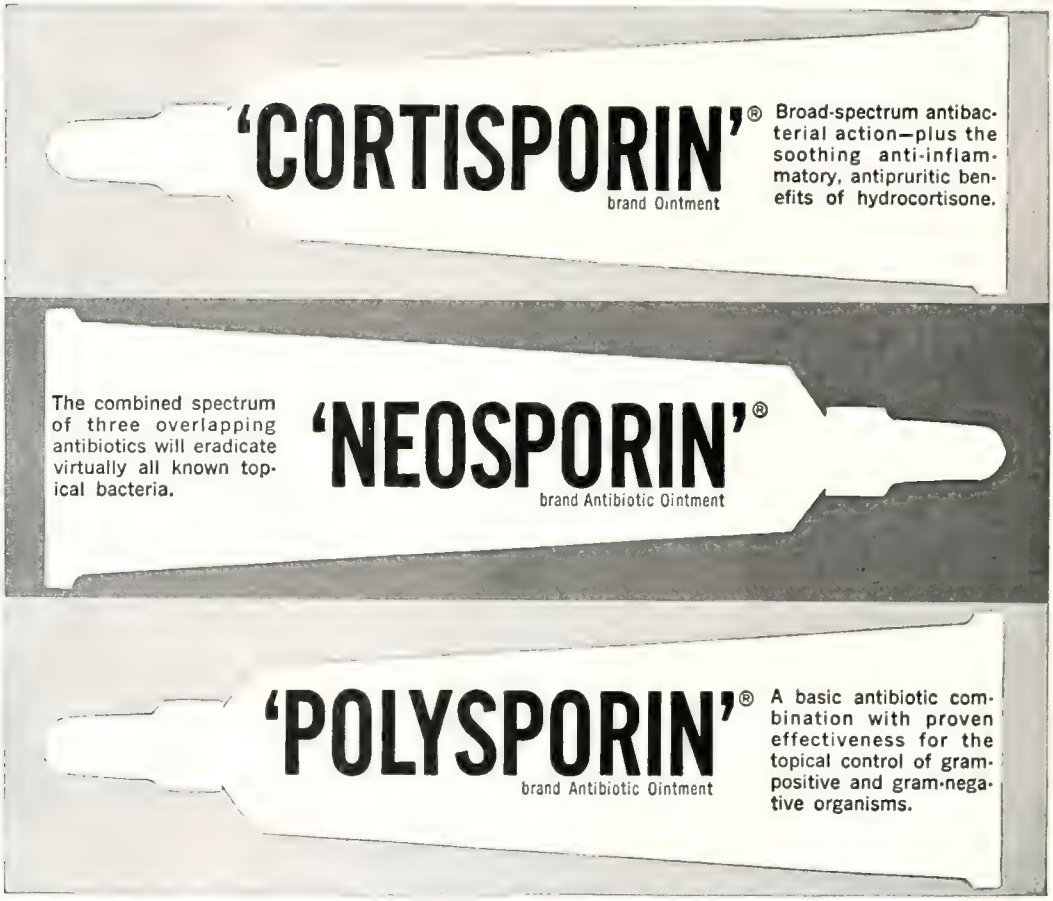
*Knudsen, E. T., and Rolinson, G. N.: Lancet 2:1105 (Dec. 19) 1959.

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Hydrocortisone	—	—	10 mg.
Supplied:	Tubes of 1 oz., ½ oz. and ⅛ oz. (with ophthalmic tip)	Tubes of 1 oz., ½ oz. and ⅛ oz. (with ophthalmic tip)	Tubes of ½ oz. and ⅛ oz. (with ophthalmic tip)

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Tain

(Triacetyloleandomycin, Triaminic® and Calurin®)



inner protection with...

safe antibiosis

Triacetyloleandomycin, equivalent to oleandomycin 125 mg. This is the URI antibiotic, clinically effective against certain antibiotic-resistant organisms.

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Triaminic®, 25 mg., three active components stop running noses. Relief starts in minutes, lasts for hours.

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Calurin®, calcium acetylsalicylate carbamide equivalent to aspirin 300 mg. This is the freely-soluble calcium aspirin that minimizes local irritation, chemical erosion, gastric damage. High, fast blood levels.

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in rheumatic disorders

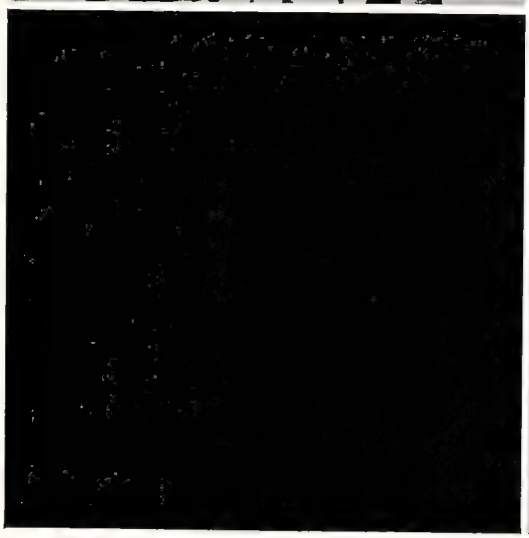
whenever aspirin proves inadequate



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brand of prednisone-phenylbutazone

Even in the more transient rheumatic disorders, an anti-inflammatory effect more potent than that provided by aspirin is often desirable to hasten recovery and get the patient back to work.
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94.3% effectiveness in respiratory infections (617 cases including tonsillitis, staphylococcal and streptococcal pharyngitis, bronchitis, infectious asthma, broncho-pneumonia, lobar pneumonia, bronchiectasis, lung abscess, otitis.) **You can count on TAO.**

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75.8% effectiveness in diverse infections (62 cases including fever of undetermined origin, peritoneal abscess, osteitis, periarthritis, septic arthritis, staphylococcal enterocolitis, gastroenteritis, carriers of staphylococci.) **You can count on TAO.**

95.6% of 1,928 cases free of side effects—in the remaining 4.4%, reactions were chiefly mild gastrointestinal disturbances which seldom necessitated discontinuance of therapy.

*In 884 of 1,928 cases the causative organisms were mostly staphylococci. The majority of clinical isolates were found to be resistant to at least one of the commonly used antibiotics and many patients had failed to respond to previous therapy with one or more antibiotics. **TAO proved 93.4% effective in these 884 cases.**

Complete bibliography available on request.

DOSAGE: varies according to severity of infection. Usual adult dose—250 to 500 mg. q.i.d. Usual pediatric dose: 3-5 mg./lb. body weight every 6 hours.

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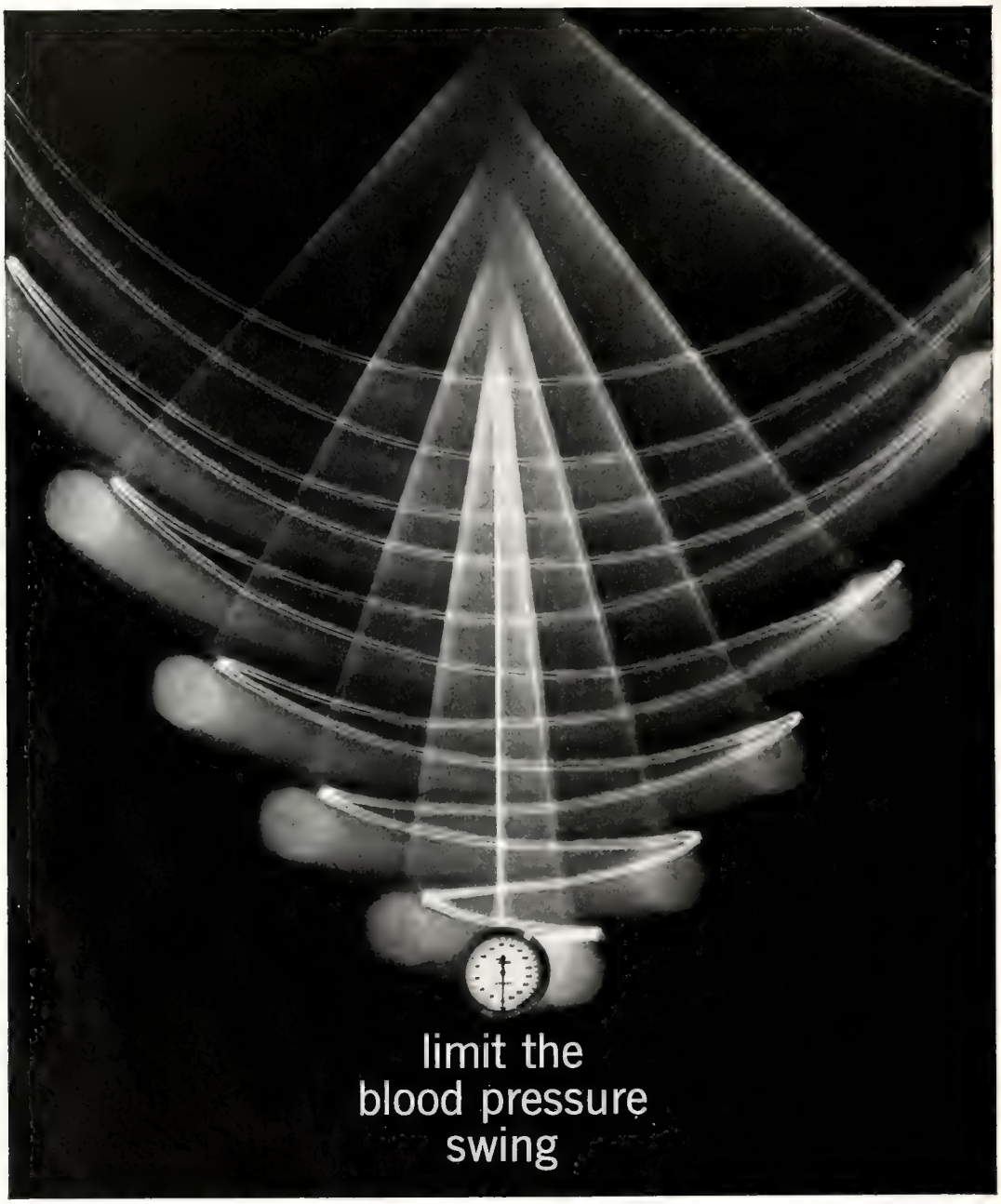
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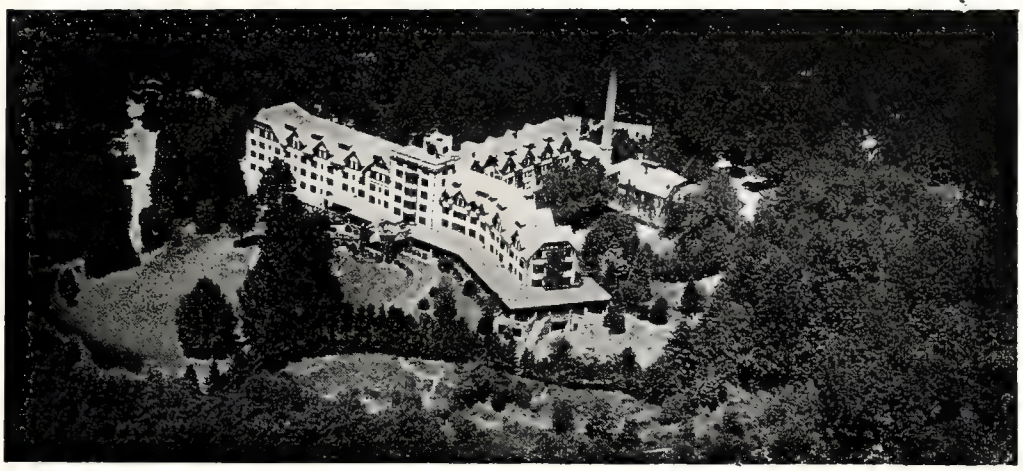
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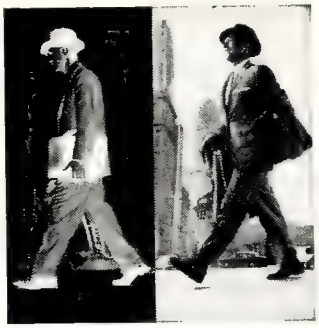
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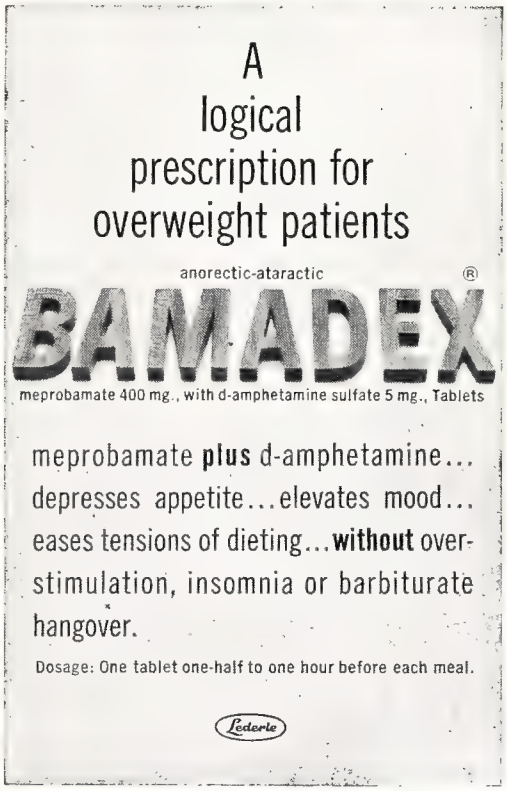
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(1) Abraham, W., in Green, J. R., & Steelman, H. F.: Epileptic Seizures, Baltimore, Williams & Wilkins Company, 1956, p. 132. (2) Crawley, J. W.: M. Clin. North America 42:317 *(March) 1958. (3) Bray, P. F.:* Pediatrics 23:151, *1959.*

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November, 1960

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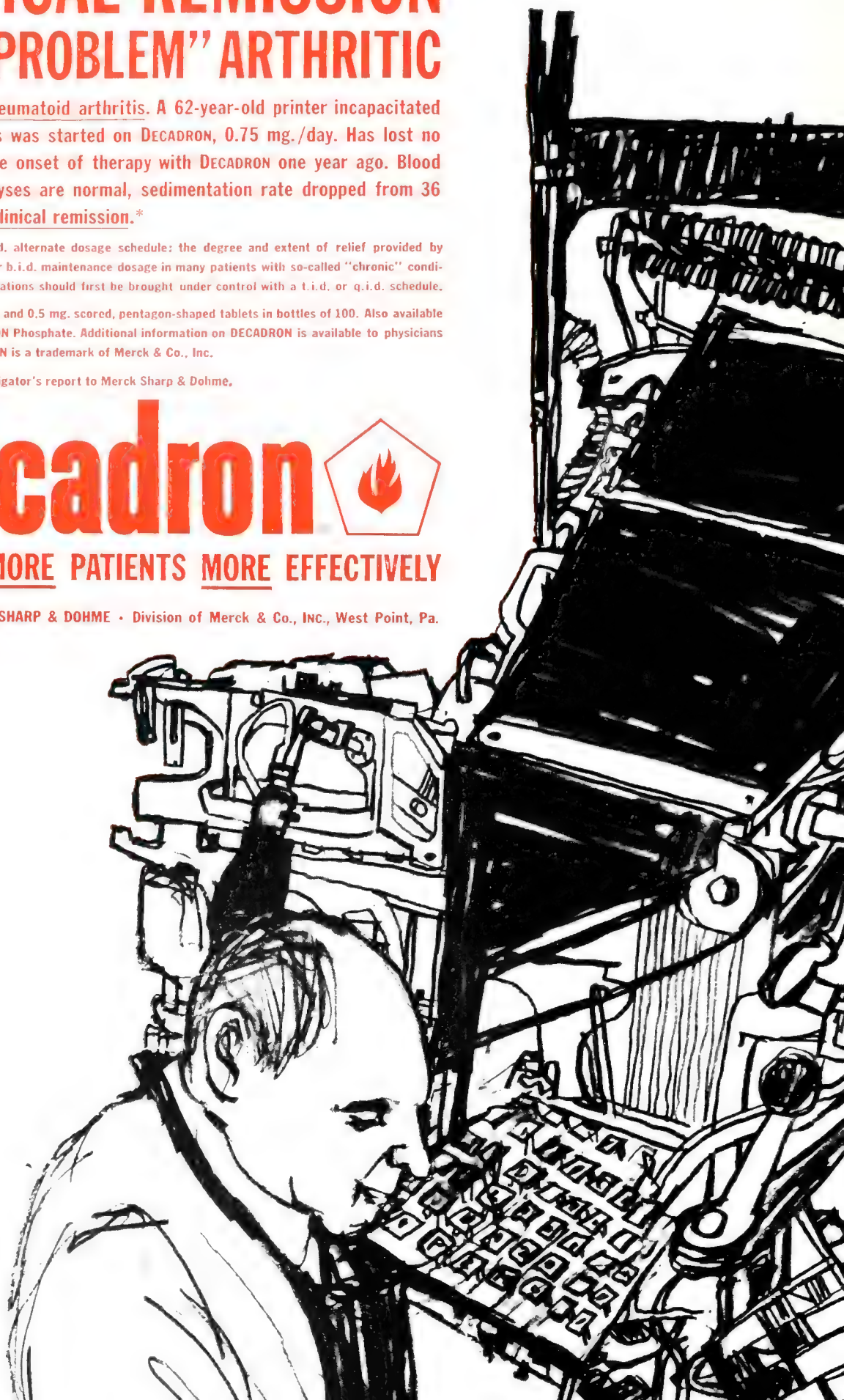
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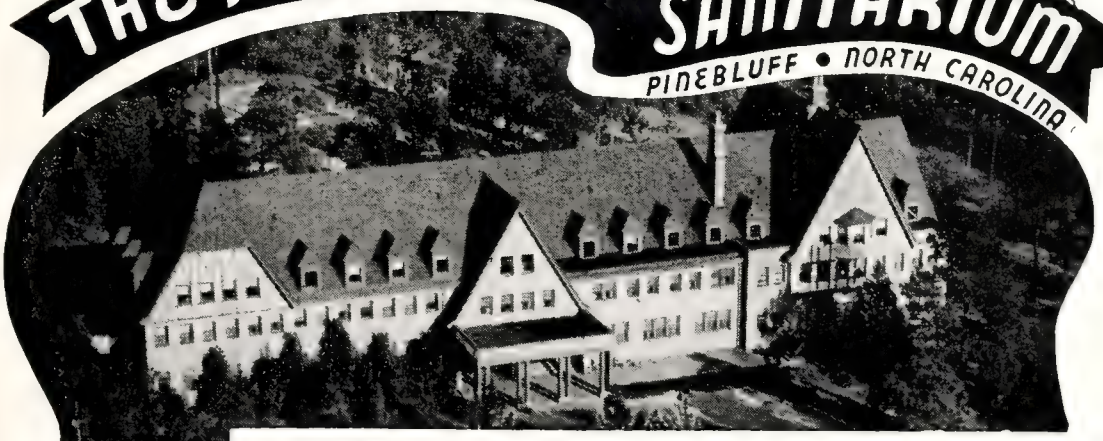
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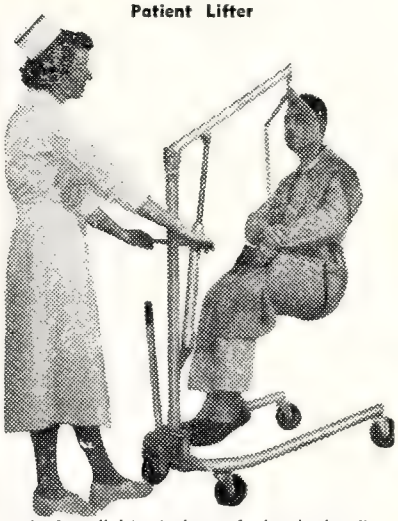
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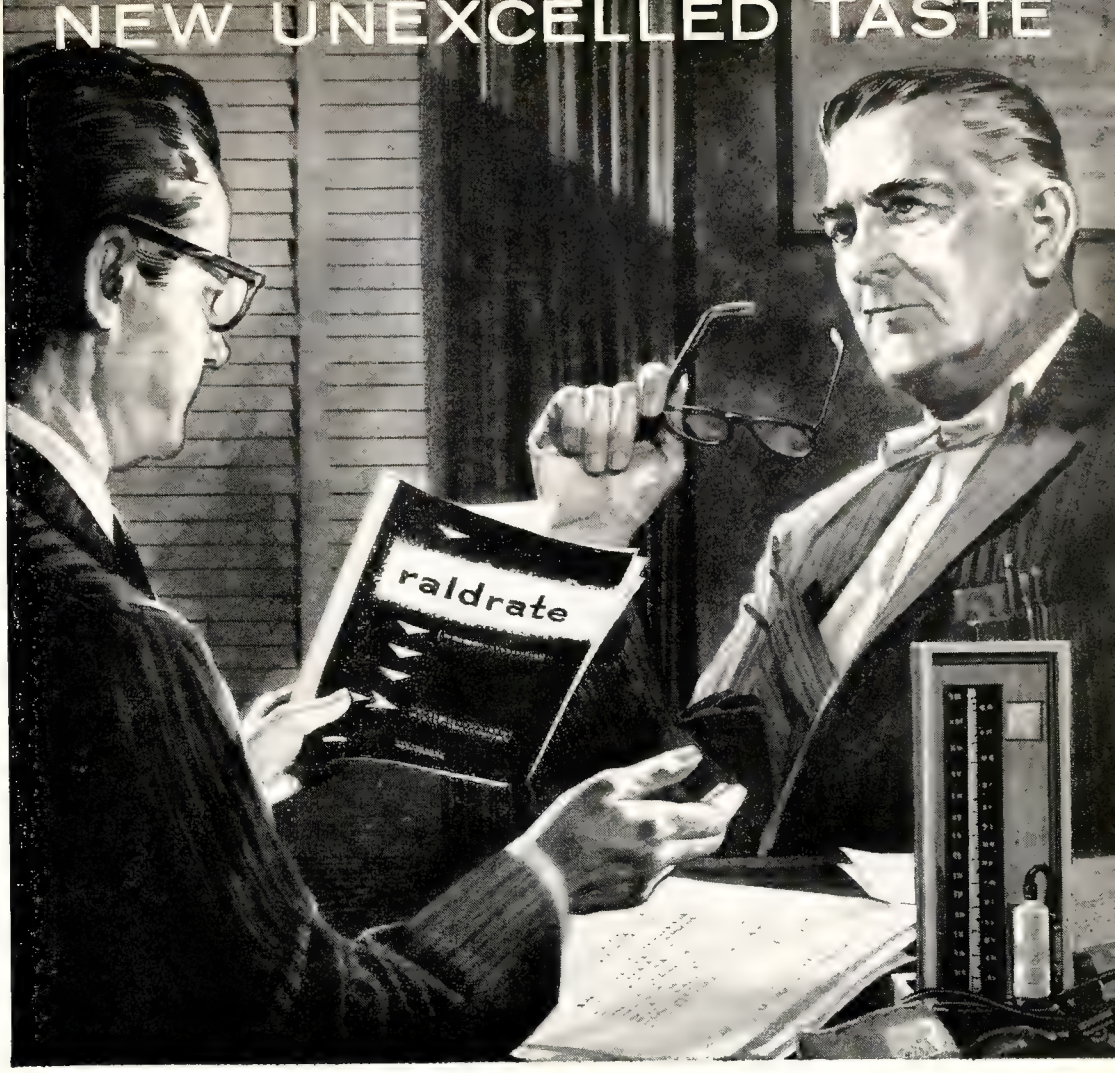
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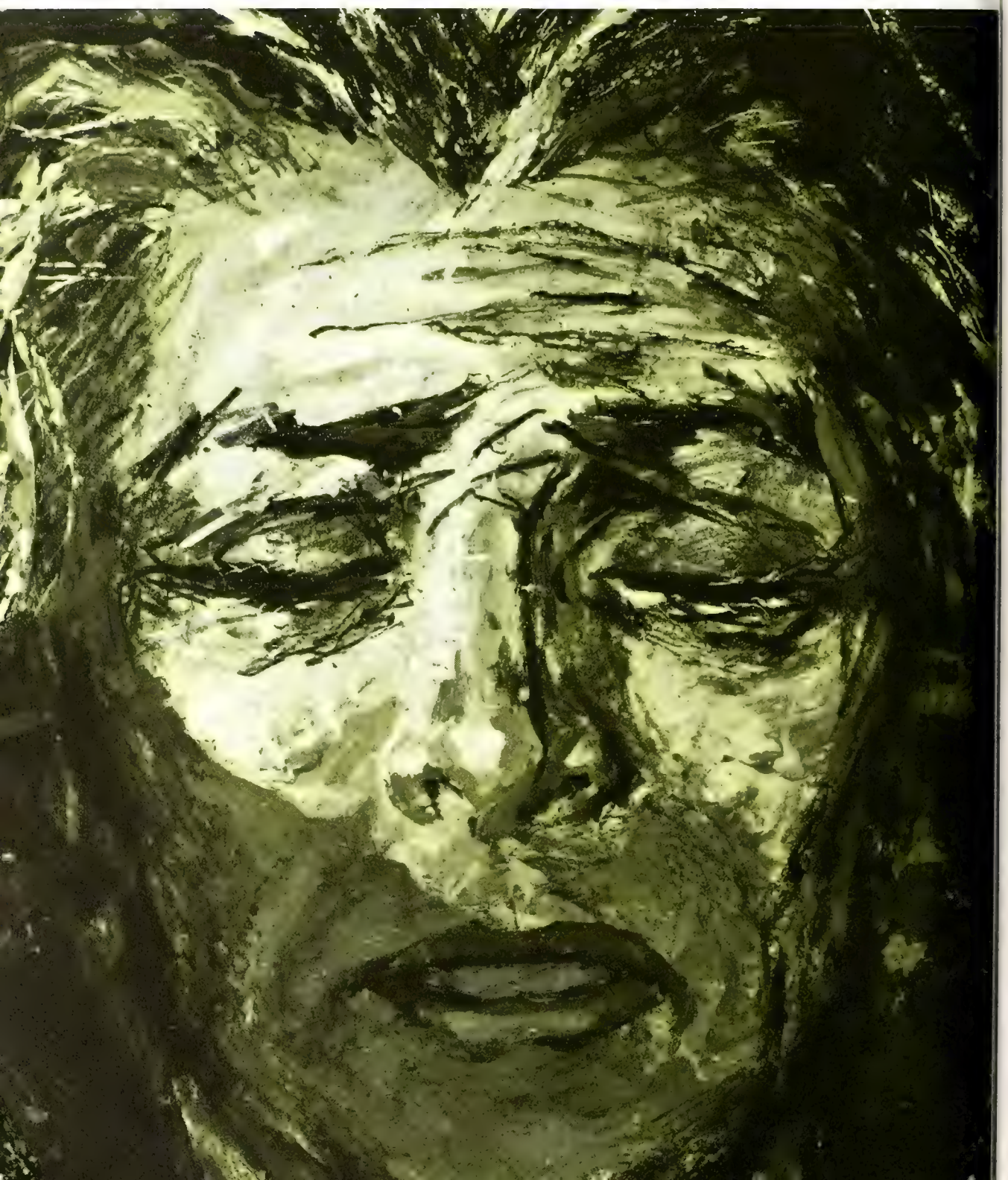
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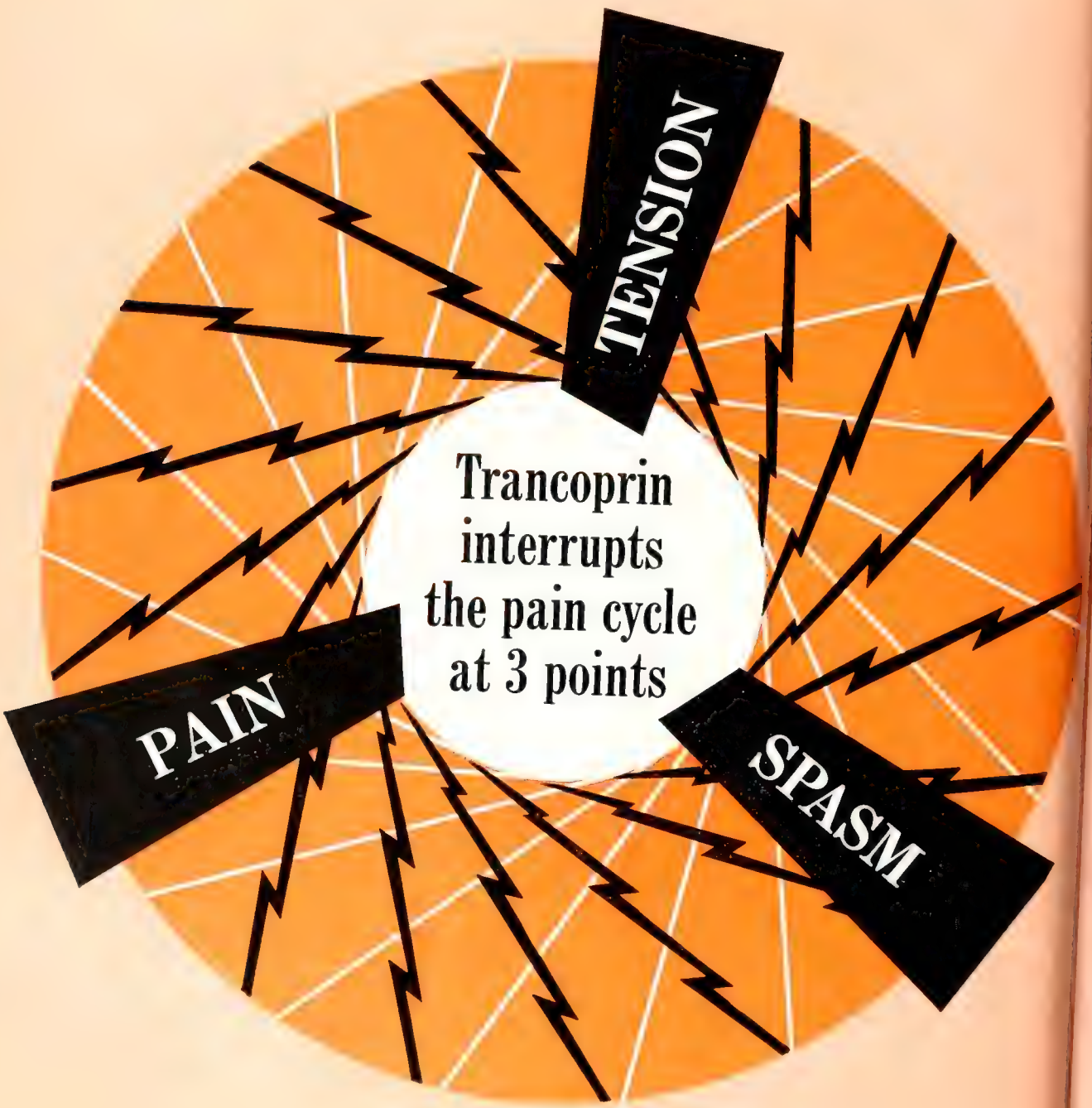
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References: 1. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 2. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 3. Gruenberg, Friedrich: *Current Therap. Res.* 2:1, Jan., 1960. 4. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 5. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 6. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 7. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 8. Collective Study, Department of Medical Research, Winthrop Laboratories. 9. Hergesheimer, L. H.: An evaluation of a muscle relaxant (Trancopal) alone and with aspirin (Trancoprin) in an industrial medical practice, to be submitted.

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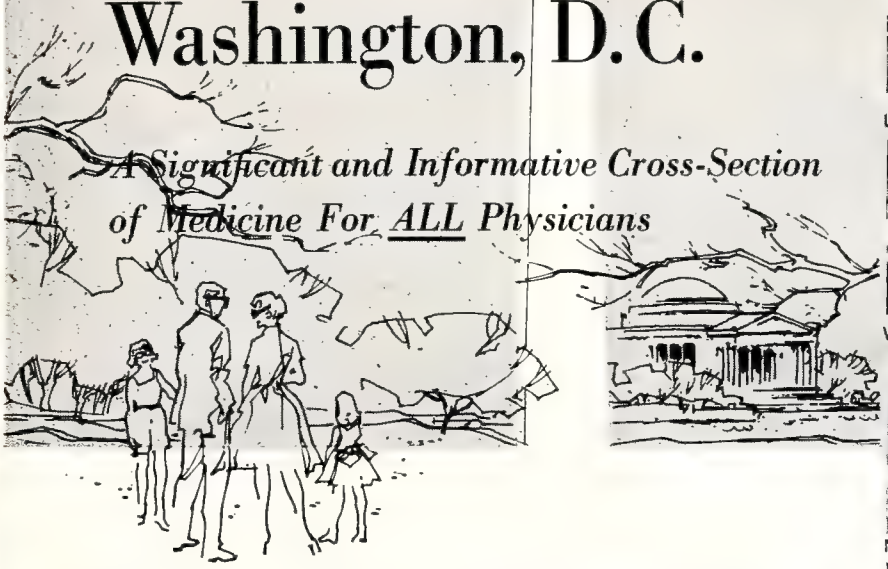
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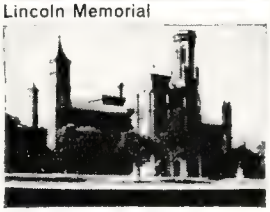


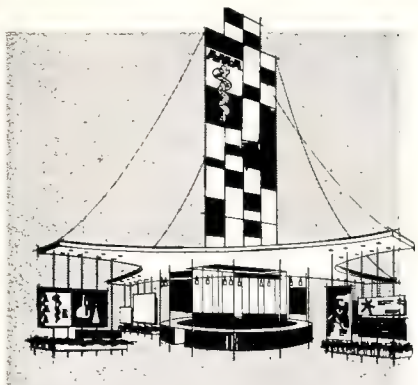

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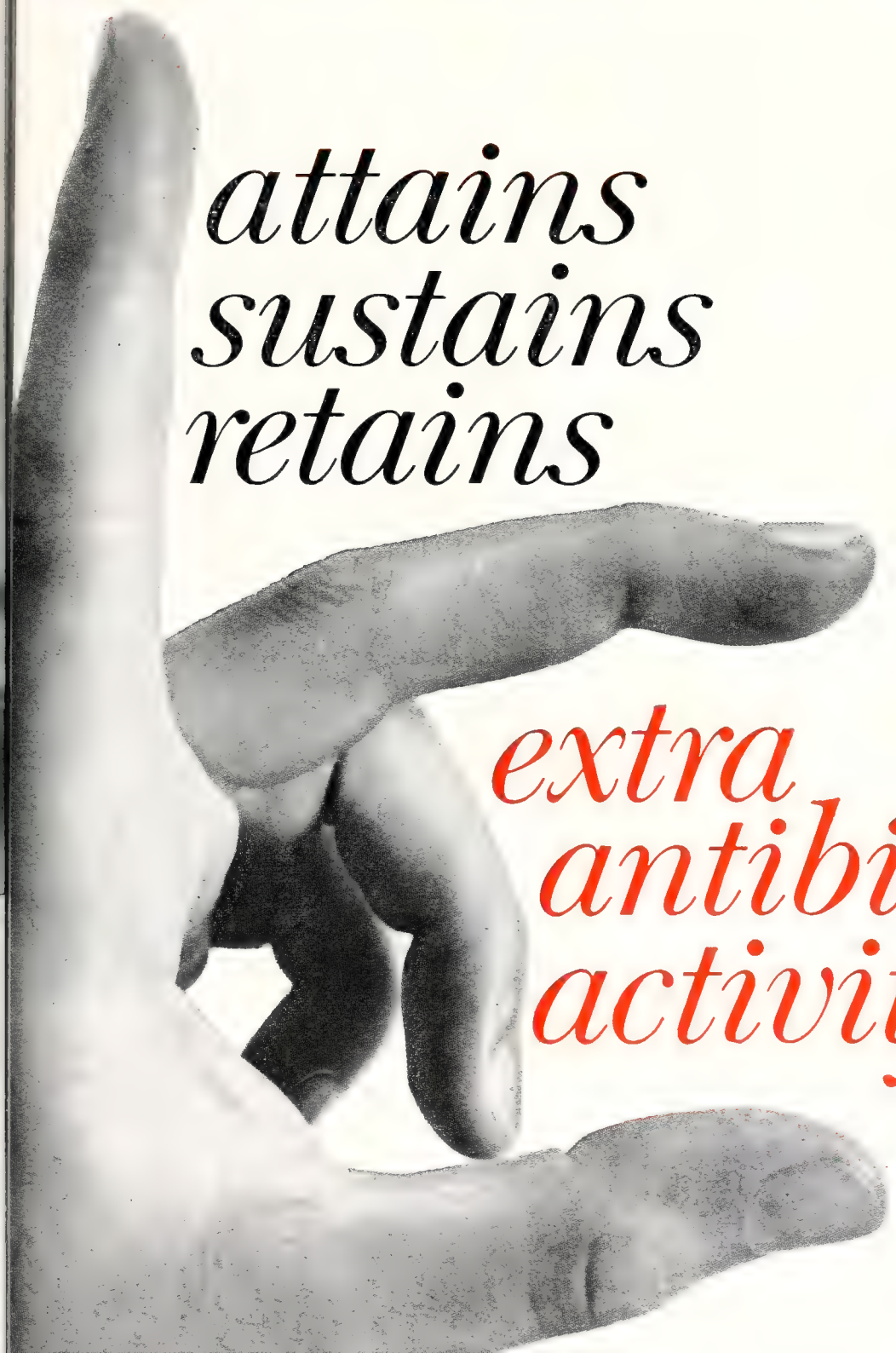
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activity

extra-activity...promptly attained

DECLOMYCIN Demethylchlortetracycline attains —usually within two hours—blood levels more than adequate to suppress susceptible pathogens. These levels are attained in tissues and body fluids on daily dosages substantially lower than those required to elicit antibiotic activity of comparable intensity with other tetracyclines. With other tetracyclines, the average, effective, adult daily dose is 1 Gm. With DECLOMYCIN Demethylchlortetracycline, it is only 600 mg.



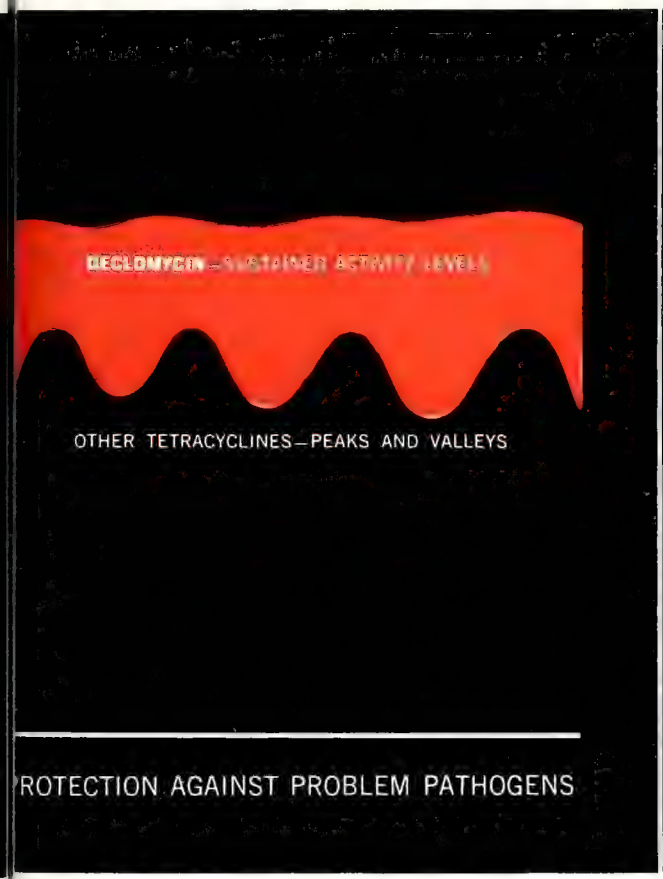
DECLO

evenly sustained

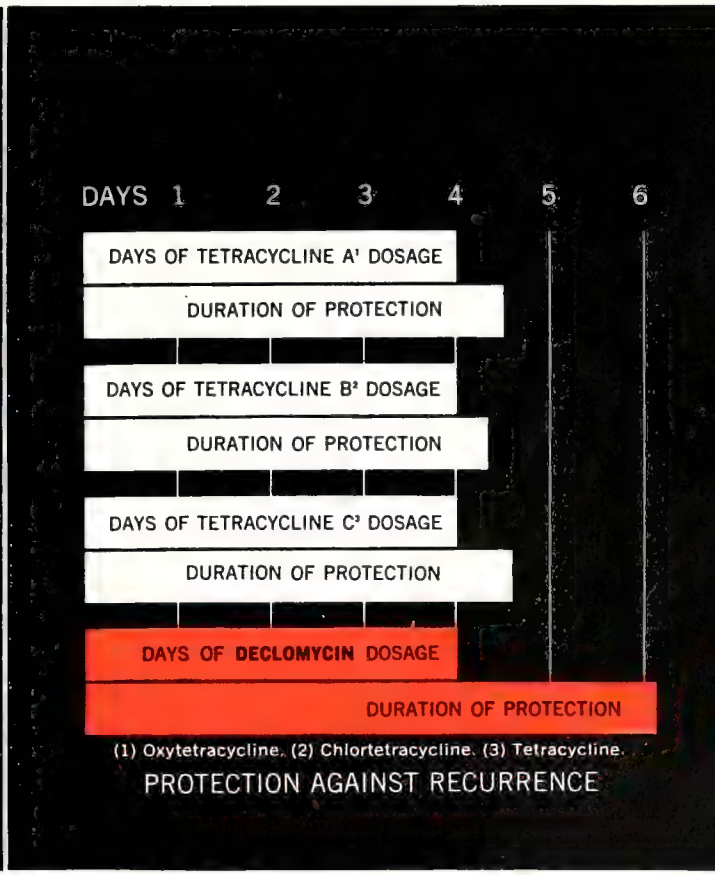
ECLOMYCIN Demethylchlortetracycline sus-ains, through the entire therapeutic course, the igh activity levels needed to control the primary nfective process and to check the onset of a com-licating secondary infection at the original—or at nother—site. This combined therapeutic action sustained, in most instances, without the ronounced hour-to-hour, dose-to-dose, peak-nd-valley fluctuations in activity levels which haracterize other tetracyclines.

long retained

DECLOMYCIN Demethylchlortetracycline retains significant activity levels, up to 48 hours after the last dose is given. At least a full, extra day of positive antibacterial action may thus be confidently expected. One capsule four times a day, for the average adult in the average infection, is the same as with other tetracyclines—but the **total** dosage is lower and the duration of anti-infective action is longer.



ROTECTION AGAINST PROBLEM PATHOGENS



(1) Oxytetracycline. (2) Chlortetracycline. (3) Tetracycline.

PROTECTION AGAINST RECURRENCE

MYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

- higher activity/intake ratio—positive antibacterial action
- sustained activity levels—protection against problem pathogens
- up to two extra days' activity—protection against recurrence

CAPSULES, 150 mg., bottles of 16 and 100. **Dosage:** Average infections—1 capsule four times daily. Severe infections—Initial dose of 2 capsules, then 1 capsule every six hours.
PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. **Dosage:** 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into 4 doses.
SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored), bottles of 2 and 16 fl. oz. **Dosage:** 3 to 6 mg. per pound body weight per day—divided into 4 doses.

PRECAUTIONS: As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics. The patient should be kept under observation.

for the
added measure
of protection
in clinical
practice

DECLOMYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



FIORINAL®

relieves pain,
muscle spasm,
nervous tension

rapid action • non-narcotic • economical

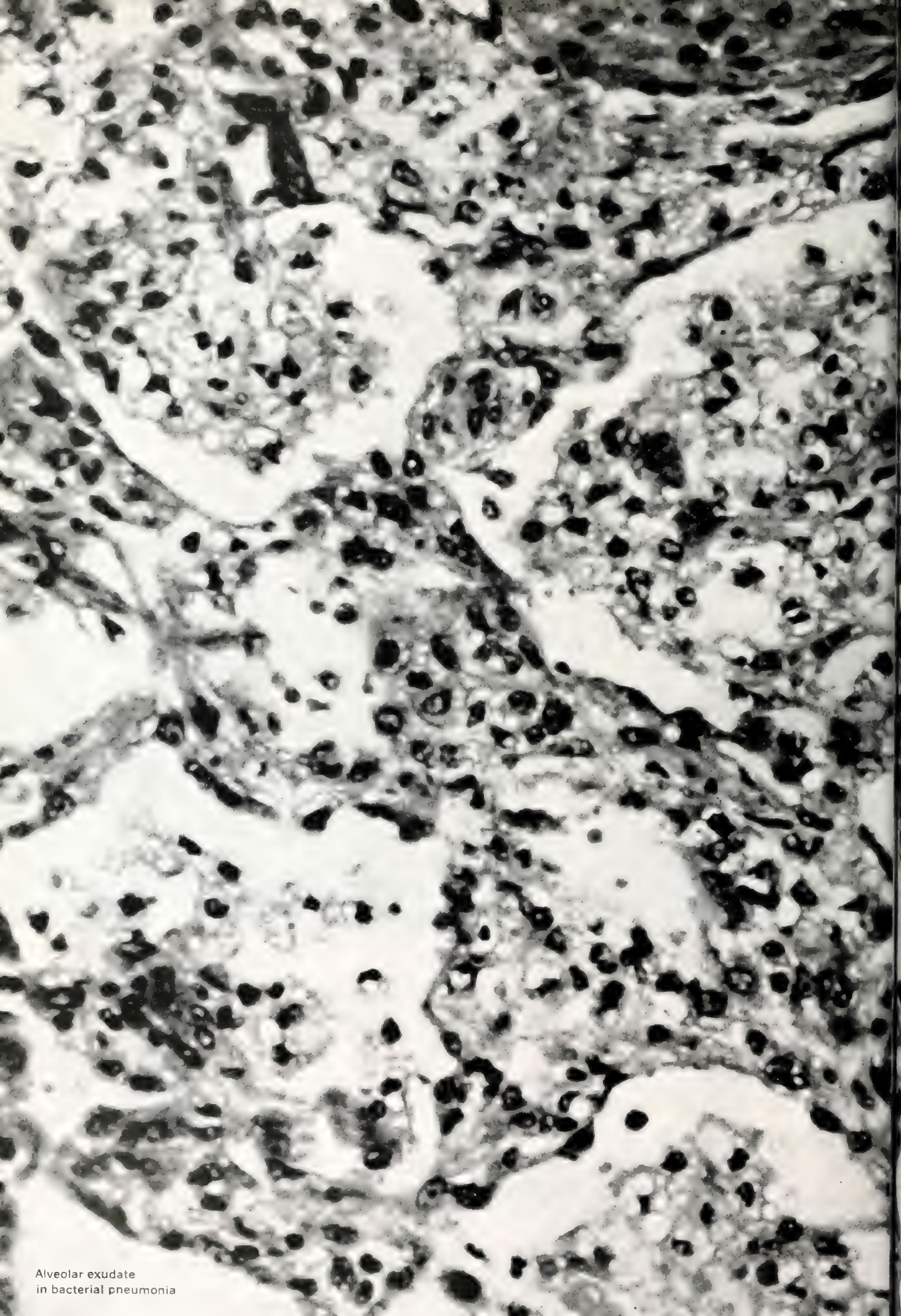
"We have found caffeine, used in combination with acetylsalicylic acid, acetophenetidin, and isobutylallylbarbituric acid, [Fiorinal] to be one of the most effective medicaments for the symptomatic treatment of headache due to tension."

Friedman, A. P., and Merritt, H. H.: J.A.M.A. *163*:1111 (Mar. 30) 1957.

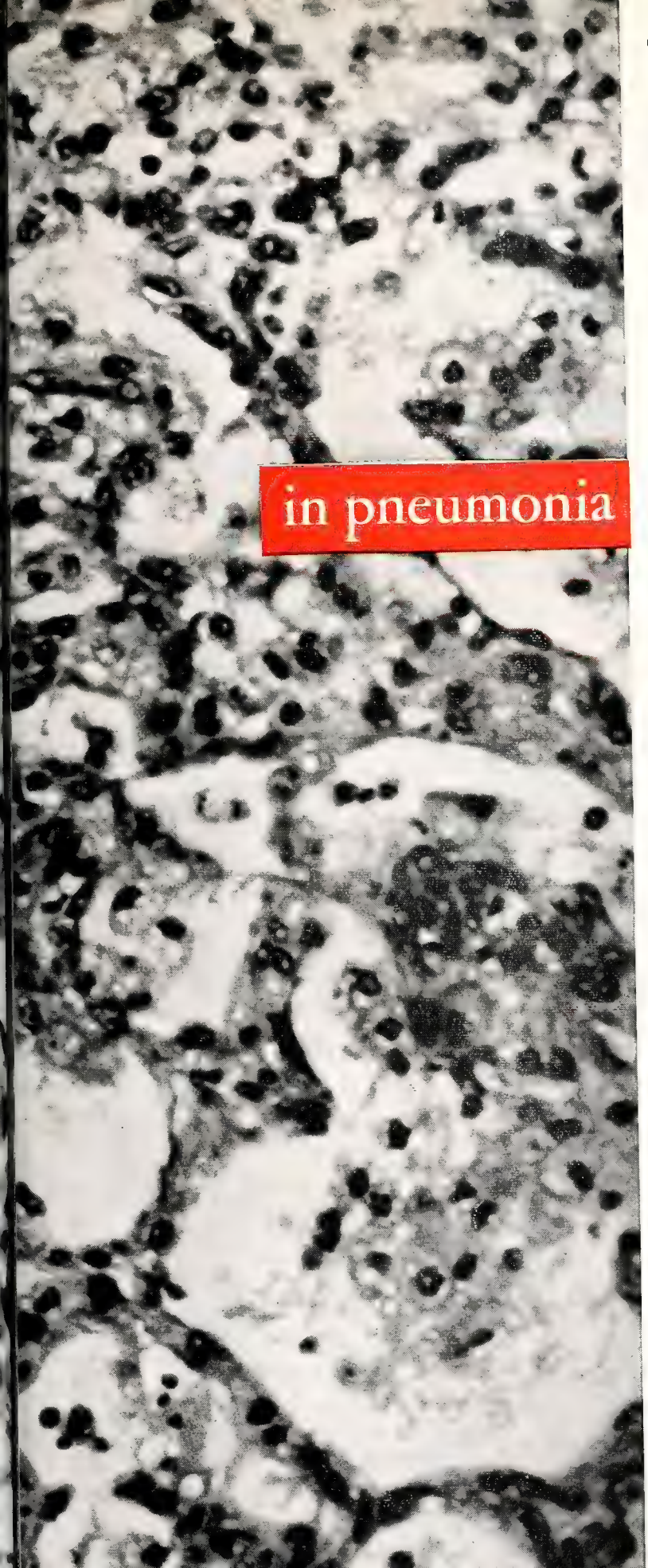
Available: Fiorinal Tablets and New Form — Fiorinal Capsules

Each contains: Sandoptal (Allylbarbituric Acid N.F. X) 50 mg. (3/4 gr.), caffeine 40 mg. (2/3 gr.), acetylsalicylic acid 200 mg. (3 gr.), acetophenetidin 130 mg. (2 gr.).

Dosage: 1 or 2 every four hours, according to need, up to 6 per day.



Alveolar exudate
in bacterial pneumonia



Therapeutic confidence

Panalba is effective against more than 30 commonly encountered pathogens including staphylococci resistant to other antibiotics. Right from the start, prescribing it gives you a high degree of assurance of obtaining the desired anti-infective action in this as in a wide variety of bacterial diseases.

Supplied: Capsules, each containing Panmycin* Phosphate (tetracycline phosphate complex), equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin,* as novobiocin sodium, in bottles of 16 and 100.

*Trademark. Reg. U. S. Pat. Off.

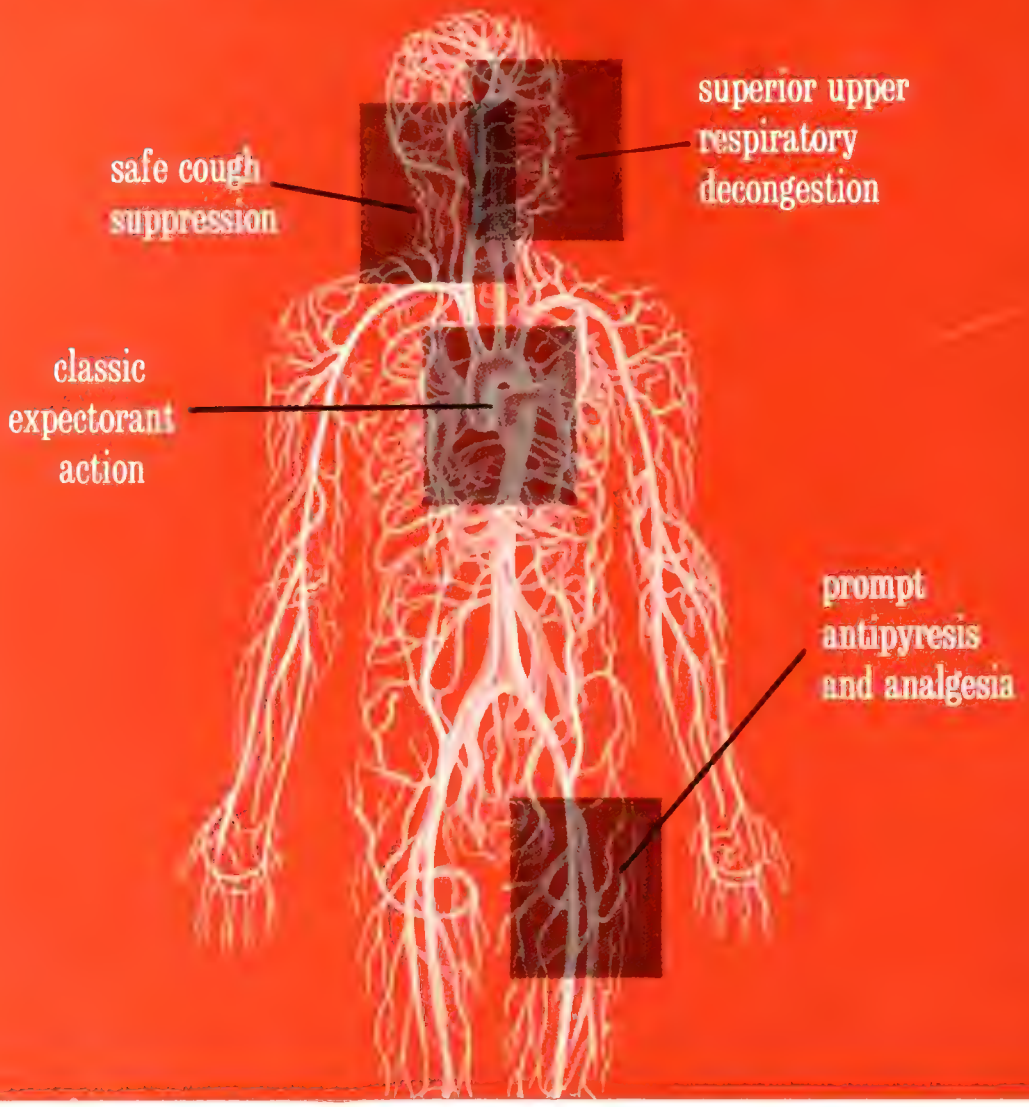
The Upjohn
Kalamazoo,

Upjo

Panalba*

your broad-spectrum antibiotic of *first* resort

for relief from the total cold syndrome...



Tussagesic*

timed-release tablets/suspension

Each Tussagesic timed-release Tablet provides:

TRIAMINIC®	50 mg.
DORMETHAN (brand of dextromethorphan HBr)	30 mg.
TERPIN HYDRATE	180 mg.
APAP (acetaminophen)	325 mg.

Dosage: *Adults and children over 12* — one tablet in the morning, midafternoon and at bedtime. Each tablet should be swallowed whole to preserve the timed-release action.

Each tsp. (5 ml.) of Tussagesic Suspension provides:

TRIAMINIC®	25 mg.
DORMETHAN (brand of dextromethorphan HBr)	15 mg.
TERPIN HYDRATE	90 mg.
APAP (acetaminophen)	120 mg.

Tussagesic Suspension is especially suited for children and for adults who prefer liquid medication; it is pleasantly flavored, non-narcotic and non-alcoholic.

Dosage (to be taken every 3 or 4 hours): *Adults and children over 12* — 1 or 2 tsp.; *Children 6 to 12* — 1 tsp.; *Children 1 to 6* — ½ tsp.; *Children under 1* — ¼ tsp.

*TRADEMARK

SMITH-DORSEY • a division of The Wander Company • Lincoln, Nebraska

UNSURPASSED "GENERAL-PURPOSE" CORTICOSTEROID . . .

Aristocort®

Triamcinolone LEDERLE

OUTSTANDING FOR "SPECIAL-PURPOSE" THERAPY

Lederle

for "special-problem"

when corticosteroid ther







surpassed "general-purpose" steroid ... outstanding for "... therapy

Aristocort

Aristocort

Triamcinolone has long since proved its unsurpassed efficacy and relative safety in the therapy of *rheumatoid arthritis, inflammatory and allergic dermatoses, bronchial asthma,* and all other conditions in which corticosteroids are indicated. But ARISTOCORT has also opened up new areas of therapy for selected patients who otherwise could not be given corticosteroids. Medicine is now in an era of "special-purpose" steroids.[1]

One outstanding advantage of triamcinolone is that it rarely produces edema and sodium retention.[1,2]

The clinical importance of this property cannot be overemphasized in treating certain types of patients. McGavack and associates[3] have reported the beneficial results with ARISTOCORT in patients with existing or impending cardiac failure, and those with obesity associated with lymphedema. Triamcinolone, in contrast to most other steroids, is not contraindicated in the presence of edema or impending cardiac decompensation.[3]

Hollander[1] points out the superiority of triamcinolone in not causing mental stimulation, increased appetite and weight gain, compared to other steroids which produce these effects in varying degrees. And McGavack,[2] in a comparative tabulation of steroid side effects, indicates that triamcinolone does not produce the increased appetite, insomnia, and psychic disturbances associated with other newer steroids.

ARISTOCORT can thus be advantageous for patients requiring corticosteroids whose appetites should not be stimulated, and for those who are already overweight or should not gain weight. Likewise, ARISTOCORT is suitable for the many patients with emotional and nervous disorders who should not be subjected to psychic stimulation. Furthermore, ARISTOCORT Triamcinolone, in effective doses, showed a low incidence of side reactions and is a steroid of choice for treating the older patient in whom salt and water retention may cause serious damage.[2]

References: 1. Hollander, J. L.: *J.A.M.A.* 172:306 (Jan. 23) 1960. 2. McGavack, T. H.: *Nebraska M. J.* 44:377 (Aug.) 1959. 3. McGavack, T. H.; Kao, K. Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 (Dec.) 1958.

Precautions: Collateral hormonal effects generally associated with corticosteroids may be induced. These include Cushingoid manifestations and muscle weakness. However, sodium and potassium retention, edema, weight gain, psychic aberration and hypertension are exceedingly rare. Dosage should be individualized and kept at the lowest level needed to control symptoms. It should not exceed 36 mg. daily without potassium supplementation. Drug should not be withdrawn abruptly. Contraindicated in herpes simplex and chicken pox.

Supplied: Scored tablets—1 mg. (yellow); 2 mg. (pink); 4 mg. (white); 16 mg. (white).

Lederle

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Simple Diet Changes

can help control serum cholesterol



Fortunately for the patient's morale — often all that is necessary when you want to prescribe a regimen to reduce serum cholesterol is to . . .

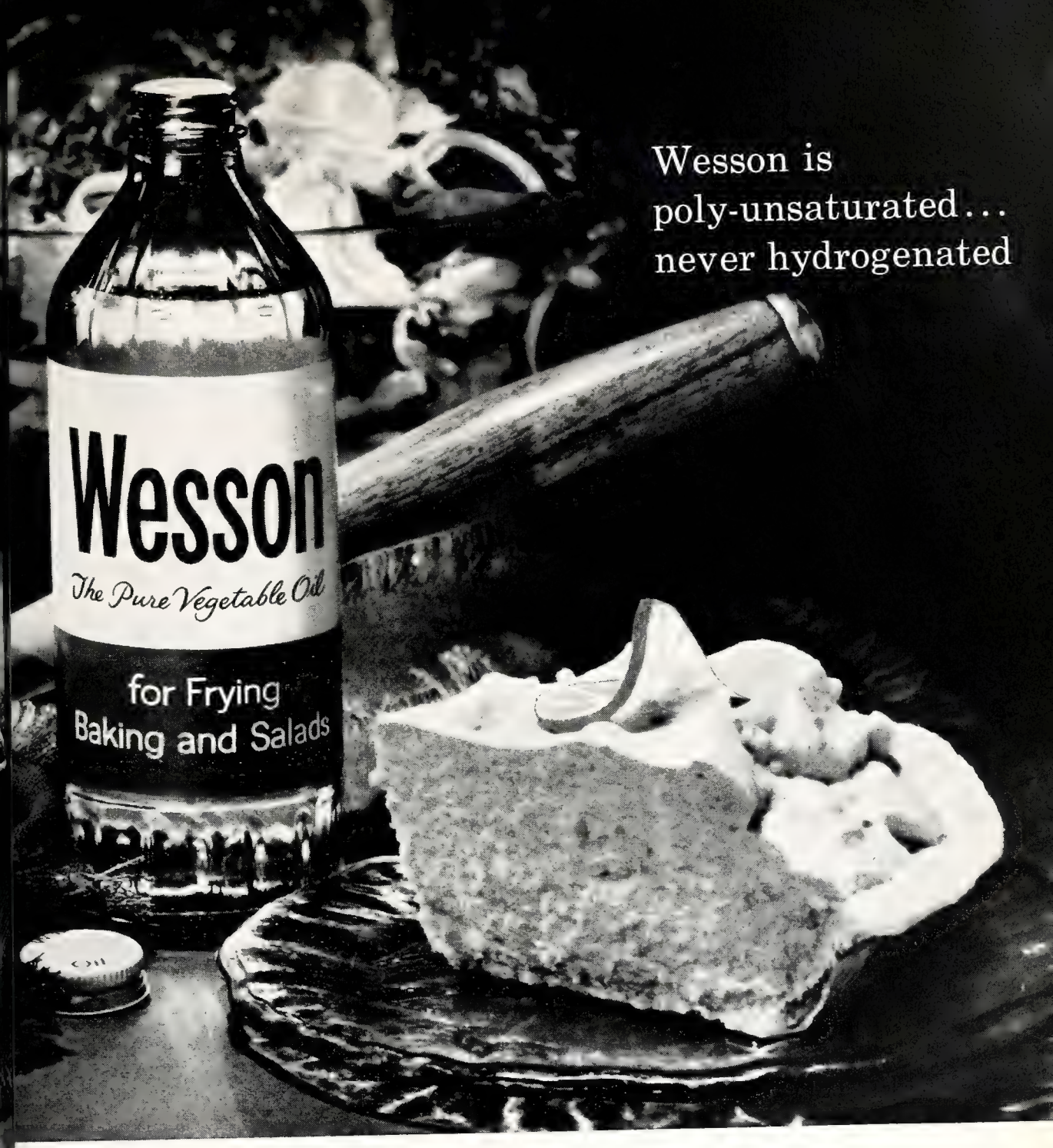
1. control the amount of calories and the type of dietary fat . . . and
2. make a simple modification in the method of food preparation, using poly-unsaturated vegetable oil in place of saturated fats

Obviously, in any special diet, the fewer required changes in the patient's eating habits, the more likelihood there is that the patient will adhere to the prescribed diet.

After adjusting total fat and calorie intake, the s
ple replacement of *saturated* fats (those used at
table and in cooking) with *poly*-unsaturated We
makes possible a most subtle dietary change,
conforms completely to therapeutic requireme

Uniformity you can depend on. Wesson ha
poly-unsaturated content better than 50%. Only
lightest cottonseed oils of high iodine nun
are selected for Wesson and no significant va
tions in standards are permitted in the 22 exac
specifications required before bottling.

Wesson satisfies the most exacting appet
To be effective, a diet must be *eaten* by the pat



majority of housewives prefer Wesson particu-
y by the criteria of odor, flavor (blandness) and
tness of color. (Substantiated by sales leadership
59 years and reconfirmed by recent tests against
next leading brand with brand identification
oved, among a national probability sample.)

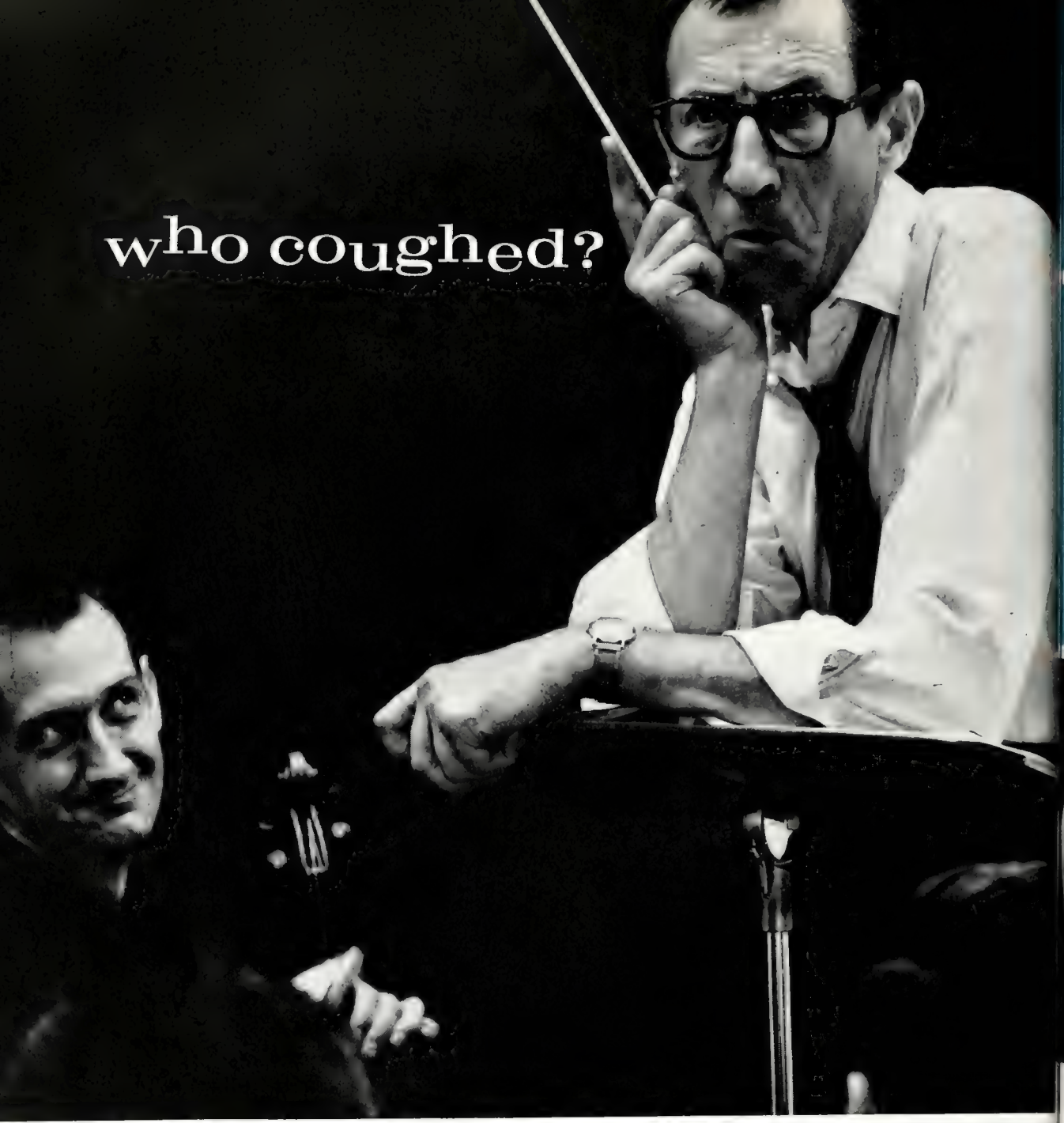
ly-unsaturated Wesson is unsurpassed
any readily available brand, where a
getable (salad) oil is medically
commended for a cholesterol depres-
nt regimen.

WESSON'S IMPORTANT CONSTITUENTS

Wesson is 100% cottonseed oil . . .	winterized and of selected quality
Linoleic acid glycerides (poly-unsaturated)	50-55%
Oleic acid glycerides (mono-unsaturated)	16-20%
Total unsaturated	70-75%
Palmitic, stearic and myristic glycerides (saturated)	25-30%
Phytosterol (Predominantly beta sitosterol)	0.3-0.5%
Total tocopherols	0.09-0.12%

Never hydrogenated—completely salt free

Free Wesson recipes for delicious main dishes, desserts and salad dressings are available for your patients. Request quantity needed from The Wesson People, Dept. N, 210 Baronne St., New Orleans 12, La.



WHENEVER COUGH THERAPY IS INDICATED

HYCOMINE®

Syrup

THE COMPLETE Rx FOR COUGH CONTROL

cough sedative | antihistamine
decongestant | expectorant

■ relieves cough and associated symptoms in 15-20 minutes ■ effective for 6 hours or longer ■ promotes expectoration ■ rarely constipates ■ agreeably cherry-flavored

Each teaspoonful (5 cc.) of HYCOMINE* Syrup contains:

Hycodan®		
Dihydrocodeinone Bitartrate	5 mg.	6.5 mg.
(Warning: May be habit-forming)		
Homatropine Methylbromide	1.5 mg.	
Pyrilamine Maleate		12.5 mg.
Phenylephrine Hydrochloride		10 mg.
Ammonium Chloride		60 mg.
Sodium Citrate		85 mg.

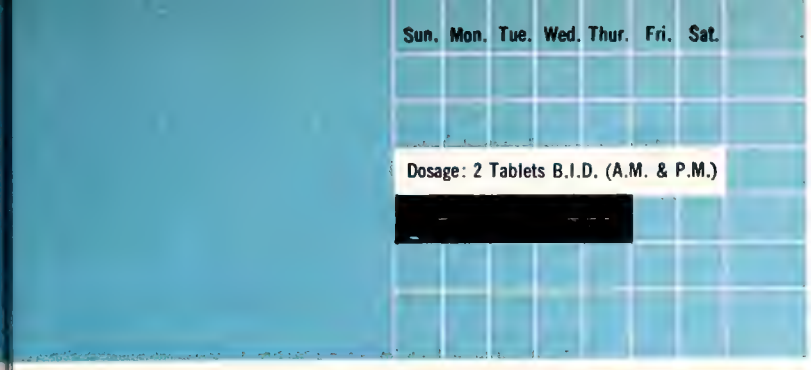
Average adult dose: One teaspoonful after meals and at bedtime. May be habit-forming. Federal law permits oral prescription.

Endo®

Literature on request

ENDO LABORATORIES
Richmond Hill 18, New York

*U.S. Pat. 2,630,400



in premenstrual tension only neo Bromth treats the whole syndrome





It was the introduction of neo Bromth several years ago that created such widespread interest in the premenstrual syndrome—because of neo Bromth's specific ability to prevent the development of the condition in the first place.

The action of neo Bromth is not limited merely to control of abnormal water retention, or of nervousness, or of pain—or any other single or several of the multiple manifestations characteristic of premenstrual tension. neo Bromth effectively controls the *whole* syndrome.

neo Bromth is also completely free from the undesirable side effects associated with such limited-action therapy as ammonium chloride, hormones, tranquilizers and potent diuretics. neo Bromth has continued to prove to be the safest—as well as the most effective—treatment for premenstrual tension.

Each 80 mg. tablet contains 50 mg. Pamabrom, and 30 mg. pyrilamine maleate. Dosage is 2 tablets twice daily (morning and night) beginning 5 to 7 days before menstruation. Discontinue when the flow starts.

BRAYTEN PHARMACEUTICAL COMPANY • Chattanooga 9, Tennessee

benzthiazide

NaClex®

a new molecule with an unsurpassed faculty for salt excretion

A. H. Robins announces NaClex, a potent, oral, nonmercurial diuretic. NaClex is a new molecule, designated benzthiazide. Its unique chemical structure produces a "pronounced increase in diuretic potency"[1] over many older diuretics. NaClex also has antihypertensive properties, and it enhances the activity of other antihypertensive drugs.



in diuresis

salt removal is still the fundamental objective

As salt goes, so goes edema

A fundamental principle of diuresis is that "increased urine volume and loss of body weight are proportional to and the osmotic consequences of loss of ions."[2] New NaClex helps reduce edema through the application of this basic principle.

Apparently functioning in the proximal renal tubules, NaClex strictly limits the reabsorption of sodium and chloride ions. To maintain the essential, subtle balance between salt and water, the body's homeostatic mechanism reponds to this loss of ions by allowing an increased excretion of excessive extracellular water. Thus the NaClex-induced removal of salt leads directly to the reduction of edema.

How potent is benzthiazide?
Compared tablet for tablet with oral diuretics now available, NaClex is unsurpassed in potency. Milligram for milligram, it has achieved optimum diuresis in pharmacologic studies at 1/20 the dose required for chlorothiazide.

What are the major diuretic indications for NaClex?
NaClex produces diuresis, weight loss, and symptomatic improvement in edema associated with conditions such as congestive heart failure, cirrhosis of the liver, chronic renal diseases (including nephrosis), premenstrual tension, toxemia of pregnancy, and obesity. Edema of local origin and that caused by steroids may also benefit.

To what extent is NaClex useful in hypertension?
NaClex has definite antihypertensive properties, and may be used alone in mild hypertension. In severer cases it may be used with other antihypertensive drugs, potentiating them and permitting their use at lower dosage. In hypertension with associated water retention, NaClex is of twofold value. It may be prescribed for congestive heart failure as an ancillary measure to digitalis.

Is potassium excretion a problem with NaClex?
In short-term therapy, excessive potassium excretion is unlikely. In the effective dose range, potassium loss varies from 1/6 to 1/2 that of sodium. Naturally, the ratio of these ions depends on the rate at which excess sodium stores are depleted, and whether salt intake is restricted.

Can NaClex and mercurials be given concurrently?
Yes. When so employed, NaClex may increase the efficacy of mercurials. But NaClex alone is often effective enough to eliminate the need for parenteral mercurial administration. Also, NaClex may be effective in cases when mercurials are not.

Supply: Available in yellow, scored 50 mg. tablets.

References: 1. Ford, R. V., Cur. Therap. Res., 2:51, 1960. 2. Pitts, R. F., Am. J. Med., 24:745, 1958.

For complete dosage schedules, precautions, or other information about new NaClex, please consult basic literature, package insert, or your local Robins representative, or write to A. H. Robins Co., Inc., Richmond, Va.

A. H. ROBINS COMPANY, INC.
RICHMOND 20, VIRGINIA

PHARMACEUTICALS 1878 RESEARCH

"I'm sending this urine specimen from the patient with pyelitis to the lab. What'll I order while I'm waiting for the findings?"

"I'd use AZOTREX. The azo dye will give her quick symptomatic relief. The sulfa-tetracycline combination is likely to hit the common urinary pathogens. If she doesn't respond, then switch to something else when you get the sensitivity data."



Azotrex®

Each AZOTREX capsule contains: TETREX® (tetracycline phosphate complex) equivalent to tetracycline HCl activity... 125 mg.; sulfamethizole... 250 mg.; phenylazo-diamino-pyridine HCl... 50 mg.
Supply: Bottles of 24 and 100.

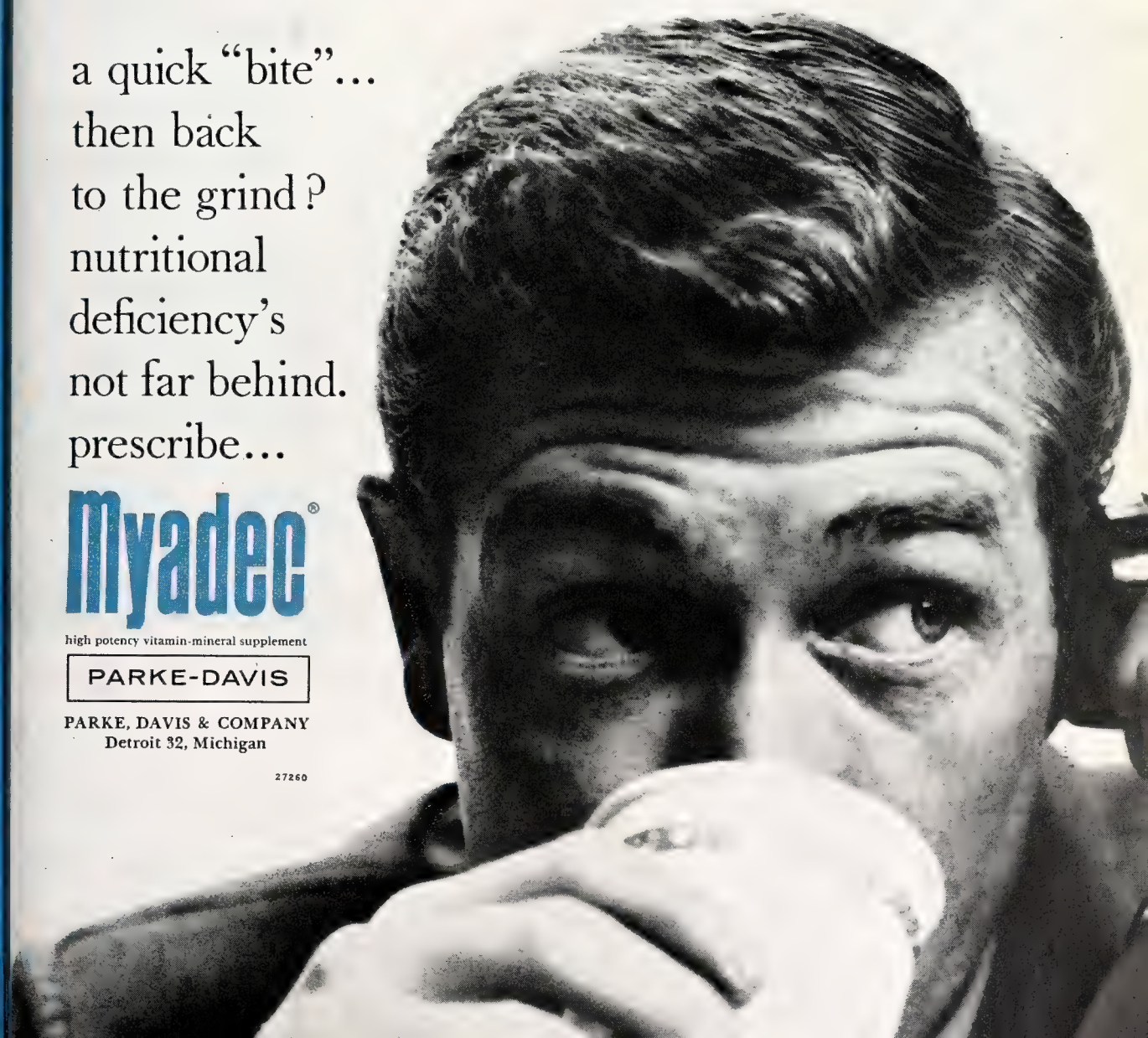
BRISTOL LABORATORIES
Div. of Bristol-Myers Co.
SYRACUSE, NEW YORK

BRISTOL

In active people who won't take time to eat properly, MYADEC can help prevent deficiencies by providing comprehensive vitamin-mineral support. Just one capsule a day supplies therapeutic doses of 9 important vitamins plus significant quantities of 11 essential minerals and trace elements. MYADEC is also valuable in vitamin depletion and stress states, in convalescence, in chronic disorders, in patients on salt-restricted diets, or wherever therapeutic vitamin-mineral supplementation is indicated.

Each MYADEC Capsule contains: VITAMINS: Vitamin B_{12} crystalline—5 mcg.; Vitamin B_2 (riboflavin)—10 mg.; Vitamin B_6 (pyridoxine hydrochloride)—2 mg.; Vitamin B_1 mononitrate—10 mg.; Nicotinamide (niacinamide)—100 mg.; Vitamin C (ascorbic acid)—150 mg.; Vitamin A—(7.5 mg.) 25,000 units; Vitamin D—(25 mcg.) 1,000 units; Vitamin E (d-alpha-tocopheryl acetate concentrate)—5 I.U. MINERALS: (as inorganic salts) Iodine—0.15 mg.; Manganese—1 mg.; Cobalt—0.1 mg.; Potassium—5 mg.; Molybdenum—0.2 mg.; Iron—15 mg.; Copper—1 mg.; Zinc—1.5 mg.; Magnesium—6 mg.; Calcium—105 mg.; Phosphorus—80 mg. Bottles of 30, 100 and 250.

a quick "bite"...
then back
to the grind?
nutritional
deficiency's
not far behind.
prescribe...



Myadec®

high potency vitamin-mineral supplement

PARKE-DAVIS

PARKE, DAVIS & COMPANY
Detroit 32, Michigan

27260



SALUTENSIN™

Hydroflumethiazide • Reserpine • Protoveratrine A

An integrated multi-therapeutic antihypertensive, that combines in balanced proportions three clinically proven antihypertensives.

In each **SALUTENSIN** Tablet:

Saluron® (hydroflumethiazide)—a saluretic-antihypertensive	50 mg.
Reserpine—a tranquilizing drug with peripheral vasorelaxant effects	0.125 mg.
Protoveratrine A—a centrally mediated vasorelaxant	0.2 mg.

Comprehensive information on dosage and precautions in official package circular or available on request.

BRISTOL LABORATORIES • Syracuse, New York

inner protection



Tain

(Triacetyloleandomycin, Triaminic® and Calurin®)

to contain the bacteria-prone cold

safe antibiosis

Triacetyloleandomycin, equivalent to oleandomycin 125 mg. This is the URI antibiotic, clinically effective against certain antibiotic-resistant organisms.

fast decongestion

Triaminic®, 25 mg., three active components stop running noses. Relief starts in minutes, lasts for hours.

well-tolerated analgesia

Calurin®, calcium acetylsalicylate carbamide equivalent to aspirin 300 mg. This is the freely-soluble calcium aspirin that minimizes local irritation, chemical erosion, gastric damage. High, fast blood levels.

TAIN brings quick, symptomatic relief of the common cold (malaise, headache, muscular cramps, aches and pains) especially when susceptible organisms are likely to cause secondary infection. Usual adult dose is 2 Inlay-Tabs, q.i.d. In bottles of 50. ℞ only. Remember, to contain the bacteria-prone cold...TAIN.

SMITH-DORSEY · LINCOLN, NEBRASKA

a division of The Wander Company

CHEMIPEN

Squibb Potassium Phenethicillin (Potassium Phenoxyethyl Penicillin)

ALL THE PHARMACOLOGIC ADVANTAGES, ALL THE THERAPEUTIC USEFULNESS OF CHEMICALLY IMPROVED PENICILLIN

Chemipen is Squibb's brand of phenethicillin potassium, the new advance in the biosynthesis of penicillin. When you prescribe Chemipen, you prescribe all the advantages of chemically improved penicillin.

Supply: Chemipen Tablets of 125 mg. (200,000 u.) and 250 mg. (400,000 u.), bottles of 24 and 100 tablets. Chemipen for Syrup (cherry-mint flavored, non-alcoholic), 125 mg. per 5 cc., 60 cc. bottles. For complete information consult package insert or write Professional Service Dept., Squibb, 745 Fifth Avenue, New York 22, N.Y. 'CHEMIPEN'® IS A SQUIBB TRADEMARK.

SQUIBB

Squibb Quality—the Priceless Ingredient



for the patient who is

coughing his head off

in upper respiratory infections

HASACODE®

- ✻ **Quiets the overactive cough reflex**
- ✻ **Relieves aches and fever**
- ✻ **Sedates the anxious patient**
- ✻ **Handy tablet form**

COMPOSITION: Each tablet contains:

Acetylsalicylic Acid	2½ grains
Acetophenetidin (Phenacetin)	2½ grains
Phenobarbital	¼ grain
Codeine Phosphate	¼ grain
Hyoscyamus Alkaloids	.0337 mg.

DOSE: One or two tablets every 3 or 4 hours, as required. Not more than 8 tablets should be taken in 24 hours. WARNING: *may be habit forming.*

also HASACODE "STRONG"

Same formula as HASACODE, but with ½ grain codeine phosphate. For use where relief of pain is the primary target. DOSE: As for HASACODE.

And for relief of less severe type of respiratory infection:

HASAMAL®

Same formula as HASACODE, but without codeine phosphate. DOSE: As for HASACODE.

SUPPLIED: All forms available in bottles of 100 and 500 tablets.

CHARLES C. HASKELL & COMPANY
Richmond, Virginia



you're treating coccal fection...

ou can't prescribe a more ffective antibiotic than

ERYTHROCIN

Erythromycin, Abbott

w much "spectrum" do you need in treating an ection? Clearly, you want an antibiotic that will w the greatest activity against the offending or- ism, *and the least activity against non-patho- ic gastro-intestinal flora.*

igh these criteria—and make this comparison— en treating your next coccal infection. Erythrocin a medium-spectrum antibiotic, notably effective against gram-positive organisms. In this it comes close to being a "specific" for coccal infections – *which means it is delivering a high degree of activity against the majority of common infection-producing bacteria.*

And against many of the troublesome "staph" strains —a group which shows increasing resistance to penicillin and certain other antibiotics—Erythrocin continues to provide bactericidal activity. Yet, as potent as Erythrocin is, *it rarely has a disturbing effect on normal gastro-intestinal flora.* Comes in easy-to-swallow Filmtabs®, 100 and 250 mg. Usual adult dose is 250 mg. every six hours. Children, in proportion to age and weight. Won't you try Erythrocin?

®Filmtab—Film-sealed tablets, Abbott.

ABBOTT



You see an improvement within a few days Thanks to your prompt treatment and the smooth action of Deprol, her depression is relieved and her anxiety and tension calmed – *often in a few days.* She eats well, sleeps well and soon returns to her normal activities.

Lifts depression...as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety...rapidly and safely

Balances the mood – no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient – *they often aggravate anxiety and tension.*

And although amphetamine-barbiturate combinations may counteract excessive stimulation – *they often deepen depression.*

In contrast to such "seesaw" effects, Deprol's smooth, *balanced* action lifts depression as it calms anxiety – both at the same time.

Acts swiftly – the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly – often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely – no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function – frequently reported with other antidepressant drugs.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. **Supplied:** Bottles of 50 light-pink,

▲Deprol▲®

an antibiotic improvement designed to provide greater therapeutic effectiveness



now Pulvules® Ilosone®

(propionyl erythromycin ester lauryl sulfate, Lilly)

in a more acid-stable form assure adequate absorption even when taken with food

Ilosone retains 97.3 percent of its antibacterial activity after exposure to gastric juice (*p*H 1.1) for forty minutes.[1] This means there is more antibiotic available for absorption—greater therapeutic activity. Clinically, too, Ilosone has been shown[2,3] to be decisively effective in a wide variety of bacterial infections—with a reassuring record of safety.[4]

Usual dosage for adults and for children over fifty pounds is 250 mg. every six hours. *Supplied* in 125 and 250-mg. Pulvules and in suspension and drops.

1. Stephens, V. C., *et al.:* J. Am. Pharm. A. (Scient. Ed.), *48*:620, 1959.
2. Salitsky, S., *et al.:* Antibiotics Annual, p. 893, 1959-1960.
3. Reichelderfer, T. E., *et al.:* Antibiotics Annual, p. 899, 1959-1960.
4. Kuder, H. V.: Clin. Pharmacol. & Therap., in press.

Lilly
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Panel Discussion on Dialysis

Opening Remarks

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The initial paragraph of the first publication on an artificial kidney, written in 1913 by Abel, Rountree, and Turner from Johns Hopkins, describes very well the purpose of such an instrument. The title of the paper is "On the Removal of Diffusible Substances From the Circulating Blood by Means of Dialysis", and the first paragraph reads like this:

> There are numerous toxic states in which the eliminating organs of the body, more especially the kidneys, are incapable of removing from the body, at an adequate rate, the natural or unnatural substances whose accumulation is detrimental to life. In the hope of providing a substitute in such emergencies, which might tide over a dangerous crisis, as well as for the important information which it might be expected to provide, concerning the substances normally present in the blood, and also for the light that might thus be thrown on intermediary stages of metabolism, a method has been devised by which the blood of a living animal may be submitted to dialysis outside the body, and again returned to the natural circulation without exposure to air, infection by microorganisms, or any alteration which would necessarily be prejudicial to life. This process may be appropriately referred to as "vivi-diffusion."

All types of artificial kidneys are based on this principle of vivi-diffusion, as they called it, or extracorporeal hemodialysis, as we call it now: the substitution of an artificial semi-permeable membrane for the non-functioning or insufficiently functioning kidney.

As an introduction to our discussion, I would like to make a few comments on the history of the artificial kidney, and on the indications for its use in general. Other members of the panel will then talk about more specific aspects of the treatment.

Presented before the Section Internal Medicine, Medical Society of the State of North Carolina, Raleigh, May 10, 1960.

The first utilization of the principle of dialysis, by Abel, Rountree, and Turner 47 years ago, was in experimental animals. Attempts to apply it in human beings failed at that time, mainly for two reasons: No material satisfactorily suitable as a semi-permeable membrane was available, and no effective and sufficiently non-toxic anticoagulant existed. Both these problems were solved during the years of the last war when cellophane and heparin became available.

In 1943 a Dutch physician, Willem Kolff, described the first artificial kidney that was practicable in human beings. He had constructed it with rather primitive means and used it successfully in a few patients. It consisted of a drum around which a cellophane tube was wound. While the drum rotated, the blood was promoted by gravity and the patient's arterial pressure. The bath fluid into which the tubes were immersed contained the essential electrolytes in normal concentrations or modified according to the need for removing, or adding any individual blood component. Dialyzation took place while the tubes were dipping into the fluid.

The first lot of this model was ready in September, 1944. Dr. Kolff's facilities in Holland for further developing the instrument were limited, and he came to this country in 1951, joining the Cleveland Clinic, where he still is.

In the meantime, in 1947, artificial kidneys of somewhat different construction had been designed in Sweden and in Canada. The Swedish model is used in some clinics in Europe. It works with a stationary cellophane tube around which the dialyzing fluid is moved.

Another type, again considerably different, was described in 1948 by Skeggs and

Leonard of Cleveland. This type is used in a number of places in this country, mainly in the west.

Kolff, in cooperation with a group in Boston, had perfected his original instrument just when the Korean war started. A so-called renal insufficiency center was set up around such an instrument in Korea to which wounded soldiers were flown by helicopter from the front hospitals. In a relatively short time the great value of this instrument was definitely established. Since then, its use has been gradually increasing.

This is quite an expensive, complicated instrument. Its fundamental construction is similar to Kolff's first type, but it has many additional features, mainly concerned with treating the blood more gently on its way outside the body.

Kolff tried to simplify it and at the same time to include the feature of ultrafiltration, which was not possible with the original model. Ultrafiltration is desirable because most oliguric or anuric patients are overhydrated from the unsuccessful attempt to force the production of urine by giving fluids. Unless the oliguria is prerenal in origin, this measure does not work, and increases the danger to the patient.

This latest type of artificial kidney has been commercially available for the past three years. We have found its technical performance to be very good. The actual kidney consists of cellophane tubing encased in a fiberglass screen and wound in form of a coil. The whole dialyzing unit can be held in one hand. The apparatus is not only simpler in construction than former models, but it also obviates the cumbersome and time-consuming procedures of special sterilization, autoclaving, and so forth. The dialyzing unit, with all the parts which come in direct contact with the blood, is disposable; it is used only once. The units are supplied in sterile condition, immediately ready for use.

As to the general indications for dialysis, one might list three or perhaps four groups: (1) acute renal failure in a patient with previously healthy kidneys, due either to nephrotoxins or to acute tubular necrosis from ischemia, formerly called lower nephron nephrosis; (2) poisoning other than nephrotoxins—situations where the kidney itself is not necessarily damaged; (3) under certain circumstances, selected cases of chronic renal disease; (4) miscellaneous situations such as intractable edema or hepatic coma.

* * *

The Use of the Artificial Kidney in the Treatment of Acute Tubular Necrosis

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CHAPEL HILL

Experience with artificial kidneys in treating acute tubular necrosis has increased remarkably in the past 10 years. Although hemodialysis was being utilized in the treatment of this disease in several large centers in this country prior to then, enthusiasm for its use was limited and sporadic.

At least two factors have served as impetus for this mushrooming experience. First, during the oKrean War it was amply demonstrated, after the development of a renal center in which thorough medical management could be achieved, that the use of the artificial kidney strikingly reduced the mortality rate from 80 to 50 per cent in posttraumatic acute tubular necrosis[1]. Second, the development of a more portable, more easily operated, and less expensive instrument, as typified by the Kolff twin-coil kidney[2], has made the apparatus more widely available.

The ensuing accumulated experience has resulted in more or less general agreement that hemodialysis is a necessary concomitant to the conservative management of acute tubular necrosis. There seems to be little doubt that hemodialysis has been life-saving in certain instances where other measures failed, and, further, there is a growing body of evidence that hemodialysis decreases the

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morbidity and incidence of complications in acute tubular necrosis.

It should be pointed out, however, that whether or not hemodialysis materially affects the mortality rate in acute tubular necrosis (other than in those cases associated with severe trauma) remains unestablished. At a recent conference in which information from many areas was combined[3], the over-all mortality rate was found to be 43 per cent, a figure which has been achieved before in civilian practice by conservative management alone.

It is highly unlikely that this question of mortality will be answered within the near future. Nevertheless, this doubt does not detract from the efficacy of the artificial kidney in selected problems in acute tubular necrosis, but should serve only to restrain us from overlooking important clues in the pathogenesis and thorough medical management of the disease.

As experience with the artificial kidney has broadened, indications for its use have changed. At present they range from those which are clearcut and agreed upon to those which are vague and in dispute.

Chemical Imbalances

Hyperkalemia

The most notable and unchanging indication for hemodialysis is uncontrollable hyperkalemia. Hemodialysis is unsurpassed in the rapidity and certainty with which the extracellular concentration of potassium may be reduced. At the North Carolina Memorial Hospital, however, the incidence of uncontrollable hyperkalemia has been impressively reduced by the aggressive use of cation exchange resins. Uncontrollable hyperkalemia, therefore, in our experience, is not a common indication for dialysis. There are times, however, when patients are admitted to the hospital with dangerous extracellular concentrations of potassium, and the more conservative measures are not satisfactory in achieving normal serum potassium concentration. The following case is illustrative.

Case 1

A 16 year old Negro boy with a history of five days of anuria (see table 1) had come to the Emergency Room because of "kidney colic" two weeks before admission. Then it had been learned that he had undergone a right nephrectomy several years previously because of renal stones. On the night of admission physical examination revealed a lethargic boy who demonstrated marked weakness and areflexia, and the electrocardiogram showed idioventricular rhythm, all suggestive of hyperkalemia. The serum potassium was 9.7 mEq. per liter. Administration of a solution containing 50 per cent glucose with insulin and calcium gluconate was begun. A flat film of the abdomen revealed a calculus just superior to the left ureterovesical junction. An attempt to pass a ureteral catheter beyond the calculus was unsuccessful.

Table 1

Early Hospital Course of a Patient with Anuria of Five Days' Duration

TIME	SERUM (K)+	CLINICAL STATUS	TREATMENT
11:00 P.M.	9.7	OBTUNDED, WEAK, AREFLEXIC; ECG = IDIOVENTRICULAR RHYTHM	50% GLUCOSE WITH INSULIN Ca ++ GLUCONATE, RESIN ENEMAS
12:30 A.M.	8.8	STRONGER, ACTIVE REFLEXES. ECG = NORMAL RHYTHM AND SIGNS OF HYPERKALEMIA	SAME AS ABOVE. UNSUCCESSFUL ATTEMPT AT URETERAL CATHETERIZATION
2:00 A.M.	8.7	ALERT, MUCH STRONGER. ECG = NORMAL RHYTHM AND PEAKED T WAVES	SAME AS ABOVE
4:00 A.M.	8.7	SAME	SAME
7:30 A.M.	6.5	ALERT	DIALYSIS STARTED
10:30 A.M.	4.8	ALERT, NORMAL ECG	DIALYSIS ENDED URETEROLITHOTOMY PERFORMED
8:30 P.M.	4.2	LARGE DIURESIS	

It was decided that a urethrolithotomy should be performed as soon as the serum potassium could be lowered to a safe level. After several hours of administration of glucose and insulin and calcium gluconate intravenously and sodium exchange resins by rectum, the serum potassium remained at 8.7 mEq. per liter. It was then decided that the artificial kidney should be used. Hemodialysis was undertaken for three hours, at which point the serum potassium was 4.8 mEq. per liter. It should be mentioned that a serum potassium determination obtained at the time dialysis was started was 6.5 mEq. per liter. Following dialysis, a ureterolithotomy was performed and a stone found to consist of pure cystine was removed. The patient began voiding freely, had an unremarkable postoperative course, and has continued to do well.

The case demonstrates several principles. First of all, the measures that were initially used to lower serum potassium—that is, administration of glucose and insulin intravenously and cation exchange resins rectally—can be quite effective in combating hyperkalemia. Secondly, these measures cannot always be depended upon to lower serum potassium to safe levels and to keep the concentration low. In these instances the artificial kidney is almost always effective. It should be pointed out that the case just cited was encountered early in our experience with the artificial kidney. Were a similar situation to arise at our hospital now, we would doubtless institute dialysis much earlier.

Others

Other chemical derangements such as extreme elevations in blood urea nitrogen and marked acidosis in themselves are often considered in some centers as indications for dialysis. Because extracellular fluid is effectively removed by machines employing ultrafiltration—such as the Kolff twin-coil kidney—marked overhydration, when resulting in symptoms of water intoxication or cardiac failure, may be an indication for hemodialysis. Dialysis may be extremely useful, since the main avenue for the disposal of excess fluid, the urine output, is absent.

Clinical Deterioration

It has become increasingly apparent to those treating acute tubular necrosis that lowering the serum potassium to normal, as well as correcting acidosis and other electrolyte derangements, does not uniformly prevent clinical deterioration as manifested by mental obtundity, twitching, convulsions, and coma. Furthermore, there is not always clear correlation between the appearance of these symptoms and the concentration of blood urea nitrogen, in itself not thought to be toxic, but rather an indication of the retention of other substances which are toxic. For these reasons, clinical deterioration of the patient rather than chemical abnormalities *per se* has become a major indication for hemodialysis.

At the present time the ease of decision to dialyze is directly dependent upon the rigidity of criteria used to make the decision. At the North Carolina Memorial Hospital clinical deterioration has been the most frequent reason for dialysis in acute tubular necrosis.

I should like to illustrate how this criterion is applied by presenting two cases which are similar in several respects (fig. 1). The patients were both of approximately the same age, the etiology of the tubular necrosis was associated with pregnancy in both cases, and both patients appeared acutely ill upon admission to the hospital. In one case it was felt necessary to institute hemodialysis and in the other it was with-

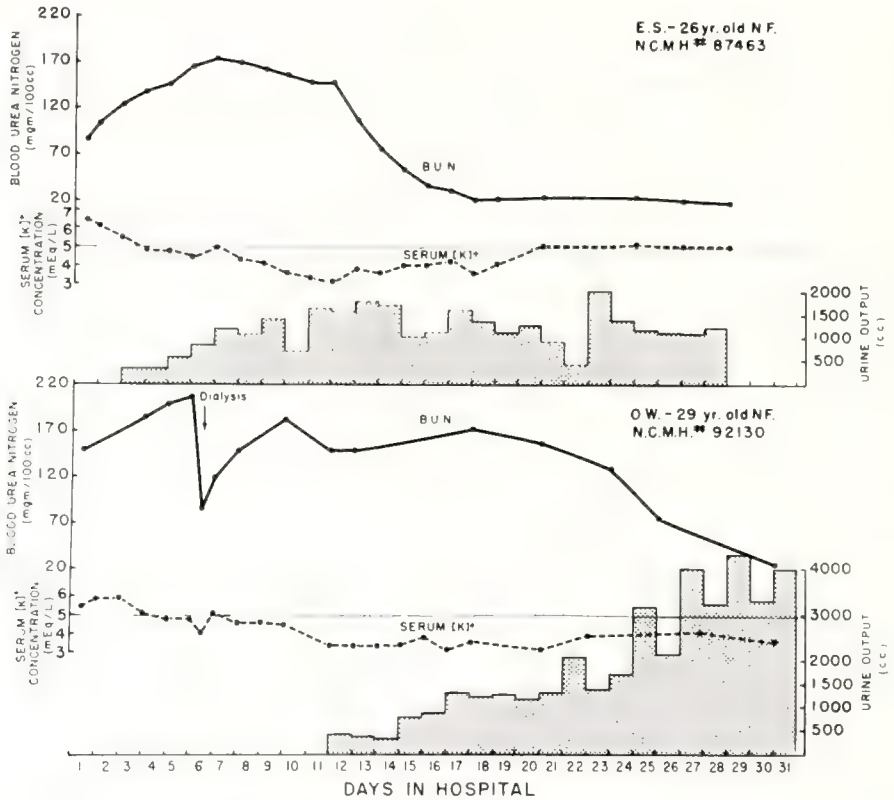


Fig. 1. Hospital course of two patients with acute tubular necrosis. (Dialysis was undertaken in patient represented in lower part of figure because of clinical deterioration.)

held. Both patients recovered and at present are doing well.

Case 2

Five days prior to admission a 26 year old Negro woman, gravida ix, para vii, had been admitted to another hospital because of continuous convulsions associated with toxemia of pregnancy. There a caesarean section had been performed. During the succeeding five days the urinary output decreased progressively from 450 cc. on the first postoperative day to 50 cc. on the day of admission to our hospital. She was transferred to the North Carolina Memorial Hospital because of the oliguria.

Physical examination revealed an agitated Negro woman who appeared critically ill. Pertinent findings were slight cardiomegaly and other signs of mild congestive heart failure, a soft abdomen with bowel sounds, a clean-looking abdominal wound, and 2 plus sacral edema.

Chemical data were: serum sodium 109 mEq. per liter, serum potassium 6.5 mEq. per liter, serum and carbon dioxide 11.7 mEq. per liter. A chest film revealed an enlarged heart and questionable pulmonary congestion. Electrocardiogram showed moderate peaking of the T waves, but no other evidence of hyperkalemia.

At this juncture it was felt that the diagnosis of acute renal failure was firmly established. The eitology was not clear, although the history of toxemia with convulsions plus the caesarean section were thought to be a likely background for hypotension and subsequent acute tubular necrosis.

It was decided that no clear cut indications for dialysis were present, but that it should be instituted in the event of further clinical deterioration. The patient was digitalized and a program of sodium ion exchange resin by rectum was begun. Hypertonic glucose was given in order to minimize protein breakdown and afford proper water replacement.

During the ensuing 24 hours the serum potassium was lowered to 5.5 mEq. per liter, and the patient became slightly more alert. Thereafter the serum potassium remained within normal limits, the carbon dioxide returned to normal, and the patient became even more alert and felt stronger. Management consisted of proper replacement of water, supply of carbohydrate, and continued resin enemas. Diuresis began on the third hospital day and was adequate by the seventh day. Dialysis was withheld from this patient, since there was no mental deterioration and the chemical environment was satisfactorily controlled.

Case 3

A 29 year old Negro woman, gravida v, para iv, was admitted to another hospital four days prior to admission to the North Carolina Memorial Hospital. She gave a history of having missed one menstrual period. On the day of admission there she had experienced severe generalized abdominal pain and marked vaginal bleeding. She was febrile and hypotensive, and pelvic examination revealed placental tissue in the cervical os. No history of self-induced abortion could be obtained. The bleeding was controlled by Pitocin. The following day, during a blood transfusion, she became febrile, apprehensive, and complained of chilly sensations. During the ensuing four days urinary output was always less than 300 cc. per day.

Because of this situation she was transferred to the North Carolina Memorial Hospital. Examination on admission disclosed an acutely ill-appearing, well oriented Negro woman. The temperature was 98°F., pulse 90, respiration 20, and blood pressure 130 systolic, 80 diastolic. The heart was not enlarged, and there was no evidence of congestive heart failure. The abdomen was distended and tender, and there were no bowel sounds. There was 1 plus pretibial edema and no sacral edema. Expert opinion was that a dilatation and curettage was not indicated and that peritonitis was not present.

Chemical data were: serum sodium 126 mEq. per liter, serum potassium 5.5 mEq. per liter and serum carbon dioxide 13 mEq. per liter. A chest film was negative and an electrocardiogram showed no signs of hyperkalemia.

The patient was treated for four days with proper fluid replacement, calories adequate to minimize protein breakdown, and cation exchange resins. During this time hyperkalemia and acidosis were not a problem. She became more lethargic, and on the night of the fourth day she had a convulsion and became much less responsive.

Because of these developments, a six-hour dialysis was performed on the following day. Although she did not become more alert, the twitching, which had been prominent, disappeared. Since the next few days following dialysis brought little change, the measure was not repeated.

Diuresis began on the twelfth day and gradually became more marked. The patient became more alert and active, and fully recovered.

Although it cannot be proved that dialysis was life-saving in this case, it seems probable that it might have been since the patient showed evidence of deterioration early in the course of anuria.

Prophylaxis

Although there have been recent reports which propose repeated prophylactic dialyses as a means to prevent clinical deterioration[4], this is not practical in most institutions at present. Since the over-all mortality rate in acute tubular necrosis is about 50 per cent without it, dialysis of all patients in order to lower mortality would result in many unnecessary dialyses. Therefore, the efficacy of prophylactic dialysis should be clearly established before it is undertaken on a widespread scale.

Summary

The value of hemodialysis as a therapeutic adjunct in the management of acute tubular necrosis has been firmly established, although the fundamental question of whether mortality rate will be lowered by its use remains unanswered. Indications for dialysis range from those which are undisputed to those which are not agreed upon. Uncontrollable hyperkalemia continues to be the clearest indication for dialysis. At present clinical deterioration, rather than chemical abnormalities *per se* (other than hyperkalemia), seems to be a more reliable criterion. Whether prophylactic dialysis is the best means of managing acute tubular necrosis remains to be established.

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The Use of the Artificial Kidney in Poisonings

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Naturally an artificial kidney was first used to treat patients with renal disease. It then was a short step to use hemodialysis to help normal kidneys rid the body of exogenous toxins before irreparable damage had been produced. The latter application is limited only by the biochemical behavior of the poison. The molecule must be small enough to pass through the membrane, and this flow across the membrane should be rapid enough to clear the blood of a large proportion of the ingested dose within a short time. The rate at which the toxin is removed will be determined by the rapidity and degree of plasma protein and tissue binding, the rate of its metabolic degradation, the volume of tissue distribution, and the route of excretion of the agent or its degradation products. These factors, too, determine the prognosis, particularly if a long period has elapsed since the poison was taken or if a tremendously large dose was used.

Because most dialyzable poisons (table 1) produce coma, the initial problem is usually the management of coma. Recent evidence[1] suggests that conservative management with minimum medication results in the lowest morbidity and mortality. This requires simply the maintenance of adequate blood pressure, urine flow and respiratory gas exchange, together with scrupulous clinical observation so that the earliest signs of deterioration may be detected. This is the stage in which hemodialysis is probably indicated unless the toxic agent is one which may produce irreparable damage. Then hemodialysis on identification seems preferable.

This procedure is not a substitute for rational management, and if a conservative program is followed it will not be necessary in most cases. We routinely have our coma patients seen in consultation and followed by an anesthesiologist, who is responsible for the maintenance of respiratory exchange.

Table 1
Dialyzable Agents

Phenobarbital
Butabarbital
Amobarbital
Pentobarbital
Secobarbital
Bromide
Salicylate
Glutethimide (Doriden)
Ethinyl-cyclohexyl carbamate (Valmid)
Ethylene glycol
Streptomycin

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When necessary, an indwelling endotracheal tube is used. Hydration and urine flow are maintained by appropriate parenteral fluids with a catheter indwelling to permit careful measurement of flow. We determine blood pH, carbon dioxide, sodium and potassium and end-expiratory carbon dioxide as indicated. A portable chest film and an electrocardiogram are taken as soon as possible. If clinical or radiographic evidence of pneumonia is present, an appropriate bactericidal antibiotic is used. We do not "cover" the indwelling catheter with an antibiotic, because the catheter will be removed shortly and we will not be able to prevent the entrance of micro-organisms with any of the antimicrobial agents currently employed; if bacteriuria persists after recovery, appropriate therapy is instituted. Nor do we employ analeptic agents, which have been useless in our experience.

Barbiturates

Members of the barbiturate family are still the most popular drugs for suicide attempts, and fortunately most of these are dialyzable[2]. Phenobarbital is probably the most effectively removed, with butabarbital, amobarbital and pentobarbital following in this order. Secobarbital is metabolized so rapidly that it is poorly dialyzable. Our last four instances of barbiturate poisoning were produced by butabarbital; none of these required dialysis. Despite their entrenched position, barbiturates are giving some ground to the newer synthetic hypnotics among the distraught and suicidal. Fortunately two of these hypnotics are dialyzable-glutethimide (Doriden)[3] and ethinyl-cyclohexyl carbamate (Valmid)[4]. We have had no serious intoxication with any agents other than glutethimide and have had no deaths in patients who have been indiscreet in using this latter preparation.

If an artificial kidney had been available two or three decades ago in North Carolina, we would probably have found greater use for it in the treatment of bromide poisonings because bromide intoxication can be treated most effectively in this manner[5]. This agent was once a Carolina favorite and as recently as 1951 Hodges and Gilmour[6] reported 36 cases of bromide intoxication observed in a three year period.

Salicylate poisoning is a problem of increasing importance in our expanding population, because children may ingest large quantities accidentally. Salicylate poisoning is a mixed disturbance, producing both respiratory alkalosis and metabolic acidosis[7], and is difficult to treat because of its complexity. Fortunately salicylate is dialyzable and hemodialysis has proved quite effective in lowering morbidity and mortality when employed soon enough[8].

Another agent frequently ingested accidentally in the belief or hope that it may be a substitute for ethyl alcohol is ethylene glycol. This is a major constituent of automobile antifreeze and when ingested may produce severe central nervous system, cardiac, and renal damage. Prompt hemodialysis in such a situation may prevent irreversible changes in the central nervous system as well as the precipitation of oxalate crystals in the kidney which might be expected to produce a severe permanent nephropathy[9].

Finally some attention might be directed to an iatrogenic condition in which hemodialysis can be of therapeutic value. Streptomycin is excreted by the kidney, so that in chronic renal disease decreased excretion may lead to prolonged retention with greater danger of damaging the eighth nerve. For this reason it has been recommended that the use of streptomycin be carefully limited in patients wth chronic renal disease. It is dialyzable, however, and hemodialysis has been used successfully for the alleviation of ototoxicity[10].

Summary

The artificial kidney properly employed is a useful means of treating certain cases of poisoning. It is not a substitute for but rather a logical addition to proper medical management.

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Additional Uses of the Artificial Kidney:

Selected Cases of Chronic Renal Failures

Intractable Edema; Hepatic Coma

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CHARLOTTE

In the treatment of chronic and irreversible diseases, the two basic features of the twin-coil artificial kidney[1], dialysis and filtration, may be employed as palliative measures. Other standard therapeutic methods have inherent limitations (failure to remove nitrogenous products and fixed acids). One need not, and should not, separate the employment of the artificial kidney from other forms of therapy, since life may be prolonged for greater periods than may be felt to be compatible in chronic diseases. The question often arises as to whether this practice is justified.

Chronic Renal Failure

The criteria for treatment of chronic renal failure lie primarily in the symptoms and signs rather than in specific abnormalities of the blood constituents. As the total functioning nephron units diminish, progressive derangements of the uremic syndrome become evident. While deterioration will increase in certain patients regardless of measures used, the hope is that the artificial kidney will reverse the trend and potentiate other forms of treatment. The following factors, therefore, will be considered in selecting patients for dialysis:

1. *Blood pressure:* The degree and duration of hypertension, if present, and whether it is benign or malignant should be considered. It has been shown that renal function decreases progressively as the blood pressure increases[2], and that it may improve with antihypertensive therapy resulting in lowered mortality[3]. Though the blood pressure may be controlled in patients having malignant hypertension, parenchymal and perivascular hyperplasia with varying degrees of renal parenchymal atrophy will develop, leading to progressive renal failure. When malignant hypertension is attended by renal failure, dialysis is not indicated. In severe benign hypertension, the prognosis is not favorable, but the over-all evaluation and response to antihypertensive drugs should be considered.

2. *Renal size:* If x-ray studies (a flat film of the abdomen, retrograde pyelograms, or both) show the kidneys to be significantly contracted, this loss of renal mass carries a grave prognosis. In addition, renal arteriograms will reveal a reduced vasculature, manifested as "silver wire" effects, rather than the normal diffuse fine glomular outline in the cortex.

3. *Associated diseases:* While uremia alone places a heavy burden on the patient, other debilitating disease, such as caricinomatosis, may nullify any benefit derived from dialysis; yet dialysis can play an important supportive role in preparing a seriously ill patient—for example, one with obstructing renal calculus—for surgery when otherwise only palliative measures might be undertaken.

4. *Histologic findings of renal biopsy:* Whether needle or open biopsies are done, examination of adequate specimens will be of diagnostic and prognostic value[5]. The histologic findings will strongly influence therapy.

5. *Volume of urine:* The volume of urine is of utmost importance. In the absence of dehydration, a fixed small volume (less than 1000 cc. per 24 hours) represents a serious further depression of glomerular filtration and a decrease of functioning nephrons due

to glomerular and parenchymal disease[6]. Prognosis is poor when this compensatory mechanism fails to meet even these minimal excretory needs. A serious drawback in the use of the artificial kidney is that urinary suppression can be produced during the procedure. This oliguria and/or anuria may last for several days, nullifying the beneficial effects of dialysis.

6. *Degree of elevation of serum creatinine and serum phosphorus:* When the serum creatinine approaches 12 mg. per 100 ml., approximately 95 per cent of the glomeruli are non-functioning[7]. Similarly, when phosphorus retention occurs, glomerular filtration is reduced to 20 per cent of normal volume[8]. Dialysis should not be done when both of these substances are markedly elevated.

In general, patients who have severe glomerular disease (subacute and chronic glomerulonephritis, lupus erythematosus, polyarteritis nodosa, scleroderma, amyloidosis, diabetic glomerulosclerosis, malignant nephrosclerosis) will respond poorly to dialysis, while those having parenchymal diseases, pyelonephritis, and polycystic renal disease may fare better.

Intractable Edema

Patients who have excessive fluid retention, whether due to cardiac failure, especially when attended by renal failure, or to renal disease primarily, may be benefited by dehydration[9].

Congestive heart failure need not be a contraindication to dialysis, though care must be taken to avoid potassium removal with resultant digitalis intoxication. Should the patient be refractory to diuretics or fail to respond rapidly and sufficiently enough to prevent death from pulmonary edema, then dialysis may be employed. Following dialysis the patients may once more become sensitive to diuretics.

Dialysis may prevent cardiopulmonary complications from developing in patients having the nephrotic syndrome due to membranous glomerulopathy resulting in oliguria. Time will be gained for a trial of steroid therapy.

Since 6 to 12 pounds of fluid may be removed during a course of treatment with the artificial kidney, care must be taken to avoid hypotension and vascular collapse. A slower rate of removal of edema fluid or multiple dialyses may be necessary to allow time between treatments for compartmental adjustments.

Hepatic Coma

The prognosis of hepatic coma is grave, since it represents further hepatic insufficiency and failure of detoxification of ammonia. Medical management[10] is directed toward either preventing the formation of excessive ammonia or utilizing ammonia already present. Dialysis will aid in the removal of ammonia should the response to medical management be insufficient, though it is probably not indicated in instances of improper diet or ingestion of ammonium drugs[11]. However, prognosis has been shown to be poor when the serum bilirubin concentration is greater than 20 mg. per 100 ml. and the sodium concentration less than 130 mEq. per liter in the presence of ascites or gastrointestinal bleeding[10a,c].

The development of renal insufficiency is also ominous[12]. While dialysis is not indicated in severe hepatic cell necrosis (acute yellow atrophy) it would seem to have something to offer in instances where renal failure has also developed, here to maintain the patient at a critical time while awaiting response to liver therapy. Dialysis may be of value in coma following hemorrhage from esophageal and gastric varices. The risk of further bleeding during dialysis can be lessened by the use of regional heparinization[13].

Summary

Admittedly, the over-all outlook for patients having chronic irreversible disease is poor. The use of the artificial kidney offers additional benefit through the removal of nitrogenous wastes, fixed acids, and edema, while correcting electrolyte disturbances. The selection of patients with chronic renal failure for dialysis is based on evidence of potential renal function. Consideration of blood pressure, renal size, histologic findings, urine volume, serum creatinine, serum phosphorus, and associated diseases helps to determine whether the artificial kidney should be employed. In intractable edema of cardiac or renal origin, filtration relieves danger to the cardiopulmonary system and allows time for other therapy. Ammonia is dialyzable and offers a means of supplemental therapy in hepatic coma, especially when renal failure occurs. Even with dialysis, however, the prognosis at this stage of liver disease remains poor.

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* * *

Closing Remarks

DR. PESCHEL

What is now actually the role of an artificial kidney in present day therapy? The conditions leading to its potential use are not too rare. Some have definitely become more frequent in recent years—for instance, acute renal failure associated (1) with transfusion reactions, particularly those due to the rarer incompatibilities such as Kell antibodies; or (2) with septicemias from antibiotic-resistant agents, such as staphylococci or gram negative organisms. Some arguments against setting up an artificial kidney laboratory, which is still rather expensive, used to be about like this: "We have achieved considerable success in managing acute renal failure by conservative means; the chances for survival and recovery are excellent in skilled hands; the few patients who are going to die will do so regardless of how you treat them." Such arguments are heard less and less. First, it seems we have to revise a little the over-all mortality rate of acute tubular necrosis treated by optimal conservative management. What seemed to be 20 per cent for a while, might be closer to 50 per cent. Second, everybody who has some experience with an artificial kidney can enumerate a number of patients whose lives were definitely saved by this instrument.

Its usefulness should not be judged on a statistical basis. The patients with acute renal failure who are treated with it are usually so desperately ill that the survival rate will never be statistically impressive. But one should look at the individual lives which are saved by this means, usually for a return to a fruitful and normal life.

So, because potential dangers to life are present even in the apparently benign case, it is highly desirable to have an artificial kidney available, and one should know where the nearest one is. It is obvious that this is not an office procedure. Smaller hospitals might have difficulties to have the necessary manpower on hand, both in terms of number and of special experience. But larger hospitals should have an artificial kidney laboratory and the team prepared to run it. Which patient should be dialyzed and at which time, is a difficult decision which is best made while the patient is observed in the institution which has an artificial kidney. Therefore, the patient should best be

transferred as early as possible, before even the transportation as such might be an additional risk; that means: without waiting until dialysis seems unavoidable.

A number of other forms of dialysis have been used. Among them, only peritoneal lavage has proved of value. It is far less effective than the artificial kidney is and has its own technical drawbacks. But it is simpler in its application, needs less personnel, and might at least be valuable for areas where no artificial kidney is within reach.

Within the last weeks, a new technique of dialysis has been reported which you might have read about. It is meant to allow continuous hemodialysis or repeated prophylactic dialysis, leaving small cannulas in an arm artery and vein for a period of days or weeks. They are connected to form an AV shunt when not used for dialyzation, in this way keeping the same vessels usable again and again. It is perhaps too early to say much about this but it might be promising.

We would like now to try to answer any questions which might come from the audience.

Management of Childhood Nephrosis

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A clinical disorder with no known cause, cure or method of prevention and with a high mortality rate is bound to have numerous forms of therapy. Such is the situation with so-called "pure" or "lipoid nephrosis" of childhood, in the management of which more than one hundred agents and procedures have been applied.

Known causes of the nephrotic syndrome do exist[1]. For example, it may be associated with diseases such as thrombosis of the renal veins, constrictive pericarditis, or diabetes, or it may be due to poisoning with heavy metals and poison oak or to drug intoxication with paramethadione; but these conditions will not be considered in this discussion.

Definition, Diagnosis, and Natural Course

Nephrosis may appear at any age but it occurs most frequently between 18 months and 4 years, with an estimated incidence of 2.1 per 100,000 children up to 9 years of age[2]. No real evidence supports a direct etiologic relationship between the disease and preceding infection, climate, season, diet, economic level, allergic history, or race. In individuals, however, one or more of these factors may affect the onset, the course of the disease, or both. The incidence is higher in males. The disease is reported in twins and in a second member of a family in about 2 to 3 per cent of cases[3].

Nephrosis is readily recognized when the patient manifests edema, proteinuria, hypoproteinemia, and hyperlipemia. If one limited the diagnosis to patients with these findings, however, other cases would go unrecognized or be misdiagnosed. In the early phase of the disease, or intermittently during its course, a patient may manifest only a significant proteinuria with doubly refractile or oval fat bodies in the urine. It may be some weeks before the low serum proteins, high serum lipids, and edema first appear or reappear. Hematuria, hypertension, and nitrogen retention may accompany the first known episode of nephrosis, and all three features or any combination of them may appear transiently during the course of the disease.

Alert parents may note first the appearance of periorbital edema. Because it frequently is intermittent and slight, it is passed off as a "cold," or an "allergy," or the parent may feel that "the child just needs more rest." During this phase the urine almost invariably reveals the proteinuria and usually the Maltese crosses under the polarizing microscope[4], whereas the characteristic blood chemistry findings may not be present. It is possible that the disease may remain in this subtle form until irreversible renal changes become established. The child may then first appear before the physician showing signs and symp-

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toms of a terminal renal syndrome and no previous recognizable history. Usually, however, after a period of weeks a generalized edema becomes apparent and is the major clinical symptom when the child is presented for diagnosis. Urinalysis reveals the proteinuria (1 or more grams per day) and Maltese crosses. Microscopic hematuria is not uncommon, and gross hematuria with red blood cell casts may be noted. One report records microscopic hematuria in 50 per cent of the cases during the first episode[5]. This "nephritic-appearing" urine may also be associated with hypertension and nitrogen retention in either the first episode of nephrosis or intermittently during the course of the disease, thereby causing some confusion in diagnosis. However, the additional blood chemistry findings and marked proteinuria characteristic of nephrosis usually aid in the differentiation of acute nephritis and nephrosis. Aid is often available in a further analysis of the urine[6]. In nephrosis the bloody urine is usually bright red with a yellow supernate following centrifugation, and the red blood cells are well preserved. In nephritis, on the other hand, the urine is brown, with a brownish supernate in the majority of cases. The red blood cells are less well preserved in the nephritic urine (46 per cent as compared with 84 per cent in nephrotic urine). It is important to note that occasionally a child with acute glomerulonephritis may transiently (one to two weeks) show a lowered total serum protein and albumin and elevated cholesterol[7].

The natural course of nephrosis after onset is quite variable. The majority of patients will have a spontaneous remission in about two months, followed in one to three years by a series of exacerbations and remissions, either of which may last for weeks or months. In rare cases the child may never have a relapse after the first remission, while occasionally the disease may progress rapidly, terminating in uremia and death. Studies of two series of nephrotic patients two or more years after onset reveal a range of apparent recovery between 18 and 41 per cent; continuing evidence of renal disease between 17 and 31 per cent and death between 42 and 51 per cent[8]. Because proteinuria and hypertension are known to occur five years after "recovery" and 20 years after onset[9], these relatively short-term follow-up figures do not afford us sufficient knowledge for accurate prognostics.

Remissions can occur following serious infections—for example, pneumonia, or peritonitis (most commonly pneumococcal), although such infections as the latter were the primary cause of non-renal deaths in nephrosis. Exacerbations occur spontaneously, but may follow mild upper respiratory diseases. As such infections, predominantly viral, are so common in the age range when the incidence of nephrosis is at its peak, the relationship could be coincidental rather than causal. Until a definitive process initiating nephrosis is identified and the possible influence of acute viral and bacterial diseases is well documented, one must be cautious in forming opinions based solely on clinical observations. Most authorities, however, accept a relationship between infections and nephrosis. As discussed in the section on treatment, methods for preventing infections and even the delaying of routine immunizations have been advised for the prevention of recurrences.

Immunology, Pathology, and Metabolism

Experiments with both human and animal subjects suggest that an antigen-antibody reaction is basic to the production of nephrosis, and that the predominant reacting tissue is the renal glomerulus[10]. Serial determinations of serum complement reveal a progressive decrease in concentration previous to a relapse, continued low levels while the disease is active, and a gradual rise just prior to remission. Since the low complement levels are not due to loss or decreased synthesis, it is presumably bound by the antibody reaction at the glomerulus[11].

The most consistent pathologic findings in the various stages of clinical nephrosis have been noted in the epithelium of the glomerular capillaries[12]. The normal capillary consists of three components. The inner lining —endothelium—is enveloped by the basement membrane, which in turn is surrounded by a layer of epithelium. Normally the epithelial cytoplasm is differentiated into numerous foot processes, which impinge on the outer aspect of the basement membrane. These processes are greatly decreased in number in all stages of nephrosis, and instead broad masses of epithelial cytoplasm are applied to the basement membrane. Farquhar and associates[12] speculate that this epithelial alteration may be secondary to

changes in the basement membrane which are inapparent under the electron microscope at this time. Later in the course of the disease areas of changed density in the basement membrane give it a moth-eaten appearance. Such a change would allow protein to leak from the glomerular capillary and possibly account for the supra-normal glomerular filtration rate noted early in the disease. The changes in the epithelium are thought possibly to reflect an attempt by the capillary to repair the holes in the basement membrane.

The changes noted in the basement membrane and endothelium appear to depend on the duration and severity of the disease. Thus the irregular thickening, decreased homogeneity, and moth-eaten appearance of the basement membrane become increasingly more apparent as the clinical disease progresses.

These recent findings are particularly interesting when compared with earlier clinicopathologic observations of Blackman[13]. He noted that the clinical progression of the many forms of Bright's diseases are correlated with high concentrations of proteinuria (more than 0.5 Gm. per 100 ml.), of which 35 per cent or more is often found to be globulin. He proposed that continuing exposure of the glomeruli to high concentrations of globulin promotes crescent and adhesion formation, with resultant loss in renal function. His studies suggest that if the concentration of protein in the glomerular filtrate could be decreased, the progress of the renal disease might be retarded or prevented.

Support for this contention is offered by the observation that nephrosis progresses to renal failure more often in children if urinary protein loss exceeds 6 Gm. per 24 hours and the urinary globulins exceed 45 per cent of the total urinary protein[14].

The increased permeability of the glomerular basement membrane permits massive proteinuria, most of which is albumin. However, as reported above and elsewhere[15], considerable loss of globulin, particularly the alpha fraction, may occur. The hypoalbuminemia is chiefly due to urinary losses, since synthesis of protein is normal or increased. An increase in the catabolism of plasma albumin, however, is an additional cause of hypoalbuminemia[16].

The elevated serum lipids (cholesterol, triglycerides, and phospholipids) are mostly bound to protein, and appear as low-density beta-lipo proteins[17]. The hyperlipemia may be initiated by the fall in albumin, since it is suggested that albumin acts as a transport mechanism for egress of cholesterol from the plasma to the bile. The triglyceride group of lipids rises first, followed by a rise in phospholipid and cholesterol[18]. Persistence of a high cholesterol value with normal albumin makes it difficult to accept this suggestion unless the transport defect may become irreversible. Further contradictory evidence is noted in one form of experimental nephrosis in which the hyperlipemia precedes the hypoproteinemia[19].

The mechanism of edema formation in nephrosis is also complex. Loss of albumin causes a decrease in blood volume, which stimulates the hypothalamic receptors to secrete antidiuretic hormone, resulting in water retention[20]. Increased secretion of aldosterone also occurs and causes tubular reabsorption of sodium, with further retention of water[21]. Other mechanisms contributing to edema beside low albumin must be considered in those rare cases of nephrosis associated with edema but with normal plasma proteins. Just as puzzling are the cases associated with hypoalbuminemia but no edema[1a, 5].

Although it appears likely that the primary process is in the kidney, it is difficult to account for some of the extrarenal metabolic dysfunction noted in nephrosis on this basis alone. A more widespread lesion occurring either as a primary immunologic response or secondary to a substance formed by such a response in an organ or a system may cause, for example, capillary damage and abnormal permeability to plasma protein. A similar suggestion has been used to explain either the selective or the generalized nature of acute glomerulonephritis[22].

Management

Until recently little help could be offered the child with nephrosis except attempts to alleviate his edema. As a result, a number of measures ranging from watermelon extracts to malarial infection were tried. Transient effects may result from intravenous administration of hyperoncotic plasma substitutes such as human serum albumin, hypertonic dextran and polyvinylpyrrolidone (P.V.P.). Diuretics [for example, xanthines, mercurials, urea, azetazolamide (Diamox) and chlorothiazide (Diuril)] are generally

ineffective, and in some instances probably contraindicated.

Low-sodium, low-protein, high-protein, and low-fat, low-salt, low-protein (rice) diets have been advocated, but no one specific diet has proven universally beneficial for nephrosis. In some instances these diets may even be detrimental if not used with discretion.

It is unfortunate that our current therapy is still partly based on assumptions, oversimplifications, opinions, and clinical hunches. However, the following is the simplified and tenuous schema of some factors involved in nephrosis upon which our management is based:

An immunologic response increases the permeability of the glomerular capillaries, causing hypoproteinemia (primarily hypoalbuminemia) which results in hypovolemia. Physiologic compensation follows and salt and water are retained via the actions of antidiuretic hormone and aldosterone, respectively. If marked proteinuria continues, especially if a high proportion is globulin, the basement membrane of the glomerular capillaries suffers further injury which may become irreversible. Both viral and bacterial infections may impede the progress of a natural or induced remission, or provoke an exacerbation.

The primary aid of therapy is to block or reverse the reaction causing the increased capillary permeability. Corticoids appear to suppress this reaction, and early in the course of nephrosis induce a complete remission in the majority of cases. Antibiotics control most, and prevent some, of the common bacterial diseases. The viral diseases are best prevented by eliminating unnecessary exposure to groups of people, especially when epidemics are present.

As soon as the diagnosis is confirmed the following program is started:

1. Treatment of any existing infection or the prophylactic use of antibiotics while corticoids are being administered.
2. Thirty-six to forty-eight milligrams of either triamcinolone (Aristocort), or 6 methyl-delta-l-hydrocortisone (Medrol) given in equally divided doses every six hours orally.
3. Potassium chloride, 1 to 3 Gm. given orally per day, although the higher dose is unnecessary with the newer corticoids.
4. A balanced diet without added salt or highly salted foods. A decrease in protein intake may be advisable during and period when nitrogen retention is noted[23].
5. A modified rest program unless massive edema is causing considerable distress.
6. Abdominal paracentesis or thoracentesis if severe respiratory difficulty or infection is suspected.
7. Continuation of this program until complete chemical and clinical remission occurs. If at the end of four weeks no remission has occurred, taper off corticoids in about one week and observe for two or three weeks. If spontaneous remission does not occur, repeat original course.
8. Institution of an intermittent program the week following initial remission and complete tapering of daily corticoids. Dosage for continuing suppression ranges from 12 to 48 mg. of Medrol or Aristocort daily, and is given orally in three divided doses on three successive days of each week. This program is continued for about nine months, following which the tapering-off precedure is begun by decreasing the total daily dose by 4 mg. each week. Prophylaxis with penicillin or sulfa is continued for about one year after proteinuria is last recorded. Routine immunizing procedures are delayed for an additional year. Acute infections are treated with the appropriate antibiotic and the corticoids are cut by about one-third to two-thirds of the total dose during the active infection period.

If signs of relapse appear during the prolonged period of corticoid treatment, the drug is given daily until suppression occurs. Following this, the regular consecutive three day per week program is reinstated. If a relapse occurs months after completion of the one year's corticoid treatment, the same schedule is repeated except that the corticoid is given for a shorter period (three to six months) after suppression is established. If the child fails to respond to corticoids and progression of renal damage is apparent, it may be advisable to try a combination of corticoids and mechlorethamine (nitrogen mustard)[24].

Although a review of our patients managed under this program will be published at a later date, one interesting observation is appropriate to this discussion.* In the corticoid induced remission, it is difficult to know whether a complete remission or simply suppression of activity exists. The sedimentation rate is a useful indicator of activity, and is frequently an aid in determining the duration and intensity of corticoid therapy[3a]. Unfortunately, its alteration with commonly occurring acute infections occasionally interferes with the reliability at a time when such an indicator is sorely needed. For this reason we are making simultaneous determinations of the Weltmann serum coagulation band (C.B.)[25]. Nephrosis is one of the rare conditions associated with a C.B. of 0 (the normal being 6). In the presence of acute upper respiratory and streptococcal diseases, the C.B. usually is 4-5 and 3-4 respectively. Thus far our experience suggests that the Weltmann reaction is more reliable than the sedimentation rate in those uneasy moments when a nephrotic patient in remission or in a period of corticoid suppression suffers an acute infection, during which an elevation of the sedimentation rate and a transient appearance of slight proteinuria occurs.

A further value of the Weltmann reaction is illustrated in the following two cases. The first patient was a child admitted with edema, hypertension, proteinuria, and gross hematuria, with red blood cell casts. The marked edema and proteinuria led us to suspect nephrosis. Her blood chemistry values and a Weltmann reaction of 0 confirmed the diagnosis of nephrosis. The second was a child with apparent acute glomerulonephritis whose blood chemistry values were consistent with nephrosis. His Weltmann reaction was 4. His blood chemistry levels returned to normal in three weeks and the nephritis has been completely resolved.

Twenty of our most recent patients are being treated with either Medrol or Aristocort†. Other than the appearance of some moon facies and changes in temperament (somewhat irritable either while on or off the drug in the consecutive three day per week program), no complications have required the discontinuance of either drug.

Two of our patients continue to show intermittent proteinuria several months after corticoid withdrawal, although no other signs of nephrosis are apparent. Further testing revealed both to have orthostatic proteinuria. Whether this condition antedated the nephrosis or is similar to the transient post-nephritic orthostatic proteinuria[26], or is a residual effect of nephrosis is not answerable at this time.

Pooled figures reveal that four years after the onset of nephrosis, 60 per cent of the patients treated in the immediate precorticoid period were alive, whereas slightly more than 75 per cent of those treated with corticoids were alive[27]. This difference points out that at least the nephrotic patient has a higher immediate survival rate. Further observations are also encouraging:

1. Chemical remission is induced with successful corticoid treatment as mentioned earlier (recently reviewed)[28].
2. Serial studies of renal biopsies with a light microscope reveal a histologic improvement with corticoids[29].
3. Similar studies with electron microscopy demonstrate the histologic disturbance returns to normal[30].

In addition, current therapy decreases the need for prolonged hospitalization formerly required for episodes of massive anasarca, which was so distressing for both child and family. As long periods of bed rest at home are no longer routinely necessary, the psychologic gains for all concerned are immeasurable. The majority of these children are of pre-school age, and restricting large group contacts is not difficult. Most school authorities make some provision for teaching home-bound children, thus enabling them to keep up with their classes. If the family lives in a city or apartment and cannot conveniently move to a less densely populated area, a visiting nurse can be of considerable help in educating the neighbors to the need of preventing needless contacts of the nephrotic with carriers of infection.

In conclusion, one aspect of overall management should be emphasized. It appears that the earlier current treatment is started, the better the immediate prognosis. Thus, one wonders if, in spite of the low incidence of nephrosis, routine testing of urine is not advisable two or three times each year for all children aged 1-6 years. Such a routine is even more important in a family with one nephrotic patient already under treatment.

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†Medrol supplied by the Upjohn Company. Aristocort supplied by Lederle Laboratories, Division of the American Cyanamid Company.

Adequate explanation to the family should precede such a procedure in order to prevent any undue concern.

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Remarks by Governor Luther H. Hodges At the North Carolina Governor's Conference on Aging

Hotel Sir Walter, Raleigh
Wednesday, July 27, 1960—8:00 p.m.

Mr. Chairman and fellow citizens:

Welcome to this Conference. I commend each of you for the interest in your communities and in your state which you demonstrate by your presence here tonight. You are giving your time and your energy because of your interest in the special problems and needs of our older citizens.

May I emphasize at the outset that I do not assume or believe that the older persons in our state present unusual and special public problems to the extent that we should isolate this particular group from all other citizens, and set them apart from the main stream of our citizenship.

Our governments have certain responsibilities that apply to all citizens, without regard to age classifications. We do know and recognize that some problems are peculiar to particular age groups. Thus, on one occasion, we will need to give particular attention to the public problems regarding the health of all citizens, or regarding the matter of heart disease, or the prevention of tuberculosis. At another time we will need to have conferences to give particular emphasis to the problem of highway safety—which certainly affects citizens of all age groups. At still another time, we find it desirable and necessary to have conferences on such subjects as education, which have tremendous impact on the well-being and progress of all citizens.

I have said all of this in order to attempt to place this particular conference in proper context. I am sure our older citizens would like to have me do this. I think it is important that all of us avoid the erroneous implication that the older citizens of North Carolina present today overwhelming public problems which weigh heavily on the shoulders of all other citizens. At the same time, we know that with the increasing longevity of people in this country we do have an increasing number of citizens who reach the age of sixty-five and over. It is estimated at the present time that there are about 310,000 North Carolinians in the age group of sixty-five and over. While the total population of our State has doubled in the last half century, the number of older people in this particular age group has increased four times during the same period.

This of course means that the elder citizen group comprises a much higher proportion of our total state population than it has in previous years, amounting in 1960 to approximately 6.7 per cent of the total population in the age group of sixty-five years and older.

The increase in the numbers in the older population group has been particularly rapid during the past decade, and during the past ten years the increase in this particular age bracket has been 37.5 per cent, compared with a total state population increase of approximately 11 per cent.

This State Conference is of course a prelude to a National Conference which is scheduled to be held in Washington, D. C., in January 1961. The Conference here this evening has been organized and planned by a group of fifteen persons whose professional activities include special knowledge of services to the older group of our population. These fifteen persons are members of the North Carolina Governor's Coordinating Committee on Aging which I appointed in the fall of 1956 and to whom I wish to express at this time my personal appreciation for the service they have rendered the State as members of this Committee.

At the time I appointed this special Committee in 1956 I asked them to accept the responsibility of (1) reviewing current activities within North Carolina to meet any special needs or problems of the increasing number of older citizens; (2) to evaluate growing special needs and to suggest measures by which these special needs or problems might be met; (3) to report from time to time on matters in this particular area.

Some time ago the United States Congress enacted legislation calling for the 1961 White House Conference on Aging. This Conference here tonight is a part of the activity and planning taking place in all states and we hope that this particular Conference will

serve at least two major purposes: (1) to help us in North Carolina better understand the problem of this area and to help us determine the best course of action we can pursue within our own State during the coming months and years; and (2) to develop findings and recommendations which can be passed on to the National Conference thereby made available to the Nation as a whole.

I am sure each of you will agree with me that you have in this Conference a very considerable task in really coming to grips on these matters and really achieving the desired purposes of this Conference. I know that you share with me the hope and the confidence that this Conference will not be just another meeting at which many persons come together for pleasant but rather general discussions, and at the conclusion of the meeting disperse to their respective homes and occupations without much information or inspiration.

I am informed that tomorrow those attending this Conference will divide into eight groups and each group will give particular study to a different but important area of interest relating to the over-all subject of the aged. I would like to comment just briefly about these particular topics which you will be discussing in detail on tomorrow.

Research and Population

One of your groups will give attention to the topic of research and population. I know that you will be pleased to learn that there are important research activities going on at the present time at North Carolina State College with particular emphasis on our rural population. And the Duke University Center on Aging is making good progress in the promotion of research, the training of investigators and the development of scientific knowledge in the field of aging. Undoubtedly there are more examples of such activity in our State and I hope these will be brought out in your discussions tomorrow. Most of us in North Carolina need no selling as to the importance of research, whatever the subject matter under consideration. We are research-minded; we are research-enthusiasts; and we are research-committed. Also, we do not permit ourselves to be restricted to orthodox research activity in graduate schools of educational institutions. We don't hesitate to stride forward and make a bold venture into a completely new arena of research activity. I have reference to the Research Triangle, of which I am sure all of you have heard, and which represents in its opportunity for the promotion of industrial research a beneficial partnership between the industrial laboratory on the one hand and the academic laboratory on the other.

Another one of your special topics tomorrow will be entitled *Income Maintenance and Employment.* In what is perhaps less sophisticated language, this topic deals with the personal incomes of our older citizens or whether they have sufficient income to get along. As you well know, much of my interest and energy have been tied up with the income improvement of all North Carolina citizens.

Increasingly, in recent years, our State employment offices have given more attention and made more effort to educate people and particularly employers on the potential advantages in reducing hiring restrictions which are based on age. The first step in this process was to give some education attention first to the personnel of the 54 local Employment Security offices. An employment counsellor has had the advantage of some specialized training.

According to statistics which I saw a few days ago, during the past two years our State Employment offices have had 52,000 new applicants over 45 years of age who have filed applications for employment. Of this 52,000 persons over 45 years of age, more than 38,000 have been placed in gainful employment. Many of these were in addition to being older citizens physically handicapped in some way. If you make a quick calculation, you would ascertain that of the total number of applicants processed by the State Employment offices during the past two years, in the age group 45 or older, some 16,000 applications still remain in the active files, and so far as the statistics indicate, this is a problem group of citizens who have expressed a desire to secure employment but who apparently have not done so. Of course, we can assume that many in this group of 16,000 did in fact secure employment or had some change in their situation which would remove them from the active application list but who did not report this change in their status to the Employment offices. Many older citizens have a problem of getting jobs be-

cause of the employment "age policies" of various firms and agencies.

Another aspect of the topic relating to income has to do with the matter of retirement pay. The Social Security program is the most important and most effective system of retirement reaching the mass of our citizens. During recent years Social Security benefits have been improved, the retirement systems of our state government and in many instances the systems of local governmental units have been coordinated with Social Security, a development which has been of particular benefit to older citizens whose retirement was imminent. During recent years retirement benefits under our State system have been improved substantially. Teachers or State employees retiring now are receiving more than twice (and sometimes three times) as much as they would have received prior to 1955.

A third aspect of this income topic deals with that fairly large number of elderly citizens who are not employed and who are not physically capable of engaging in productive employment. Neither are many of the persons in this group participating in any retirement system, Social Security or otherwise. Or if persons in this group do have retirement type income, it generally consists of minimum Social Security payments which are inadequate to meet minimum day-to-day living needs. For these older citizens who are not employed, and who have inadequate income from retirement or other sources, they must rely on payments from public funds under the welfare program. I am hopeful that the welfare payments of the State in the future will be increased as the income of the State increases.

Perhaps by some time in the decades ahead we will have reached the point where practically 100 per cent of all citizens who have reached the age of 65 and older will have participated in far more complete and effective retirement systems during the years of their gainful employment so that when they get to the age of retirement, their retirement compensation will be at comparative levels far above that which is now generally available, whether under Social Security or other retirement systems, and perhaps the time will come when the number of older citizens requiring direct welfare assistance will be much less percentage-wise than what we have in this day and time.

Still another topic which some of you will consider tomorrow will be the subject of health and medical care for the aged. I will not attempt at this time to go into detail as to what is done presently under governmental programs or as to what is currently under consideration and what we may foresee perhaps in the near future. Much is being done today that was not being done twenty years ago. There are some obvious needs today which demand organized action which can only come through the agencies of our government. Exactly what programs should be adopted for the future is a matter involving some considerable differences of opinion and will be discussed in the coming political campaign. Whichever way these specific questions are resolved, I am confident that within the next few years our Nation as a whole will in fact make great progress in providing better and more adequate health and medical care for the older citizens of the Nation, as the problem is becoming more acute every year.

In the meanwhile, with regard to medical aid and other kinds of aid and needs, is it too much to hope for to feel that children and close relatives of our older citizens will show more interest and become more helpful personally than many are now doing? Impersonality and institutionalizing leave much to be desired in appraising the future of our older citizens who find themselves in need.

Other items which will be considered at the topic of social services which are available to our older citizens, including special activities by family service agencies, Red Cross chapters, mental hygiene clinics, as well as local departments of public welfare; and the topic of housing and living arrangements which cannot, I think, be isolated and dealt with in a vacuum apart from the other specific subjects I have mentioned. Then, there is the topic of education. It is especially good that there is a growing emphasis on encouraging older citizens to participate in organized adult education activities. We really never get too old to learn and the older citizens, no less than young citizens, have a richer and more meaningful life if their minds are occupied and stimulated by individual educational endeavors. An important facility in organized educational activities for older citizens are the libraries of the State, which will also be a separate topic for your discussion.

Recreation, family and community relationships, religion, and personnel round out the list of specialized topics for your discussion.

I would like to close my remarks on substantially the same theme with which I began, and that is we should not make the mistake of proceeding on the assumption that the older citizens in our population are somehow a physically separate group which stands apart, which stands even outside the main stream of society. As a matter of fact, our older citizens are composed of parents and grandparents who live in our homes and who work in our communities, citizens whom we see at church on Sundays, as well as citizens who may be restricted to their homes by ill health. This group also of course includes those who are in institutions or nursing homes. Certainly, for the most part, the group of older citizens in North Carolina are an integral and inseparable part of our total citizenship group. I think then that to the extent that we develop effective ways and means to enable older citizens meet their own problems, whether financial or otherwise, and to do this in a way which maintains them as integral parts of our community, maintaining the thread of family relationships and community relationships, then we shall be more successful in our efforts on behalf of the older citizens.

This Conference has a great opportunity to make a significant contribution in the public interest, and I wish you every success.

The Health and Adjustment of the Aged Person

EWALD W. BUSSE, M.D.
DURHAM

I am pleased to have an opportunity to share ideas with the participants in this conference. I know that the citizens of North Carolina are sincerely interested in the problems of elderly people, and are determined to do their part to help solve these problems. When I talk to representatives of national organizations and officials of the federal government, I am proud to tell them that I come from North Carolina, because these informed lay and professional people are aware of the progress our state has made in the field of aging. Under the able leadership of many of the persons gathered here today, North Carolina will continue to be in the forefront of states seeking to solve the many health and social problems that confront our elderly citizens.

The Meaning of Health

According to the constitution of the World Health Organization (WHO), drafted in 1946, "Health is a state of complete physical, mental, and social well being and not merely the absence of disease or infirmity." This definition represents an ideal, a state of perfect health. If it were rigidly applied as a measuring device, there is probably no living person who would qualify for any reasonable length of time as being healthy. This definition recognizes that health is a composite state, involving the mind and the emotions, as well as the body.

If we could eliminate all disease from a group of people 60 years of age or older, would they really be healthy? Probably not, according to this definition. Even in the absence of disease, they would have many social problems which would, in turn, produce mental conflicts. In addition, they would be affected by the biologic problem of primary aging. Most people doing medical research in the field of aging distinguish between *primary* and *secondary* aging. Secondary aging refers to the loss of function which results from a disease process, while primary aging is a process in itself—a process of change resulting solely from the passage of time. In the human organism, unfortunately, the changes wrought by time are often associated with declines in function: alterations of perception, reduction in speed, diminution in strength, and so forth.

In WHO's definition of health, the idea of *adjustment* is contained in the words "social well being." When health is conceived as such a complex state, it is obvious that physicians are not capable of carrying out

Delivered at the Governor's Conference on Aging, Raleigh, July 28, 1960

From the Department of Psychiatry, Duke University Medical Center, Durham, North Carolina.

all the functions necessary to make people healthy. Physicians are trained to be interested primarily in the person as a biologic unit. The physician who recognizes that the mind and body are inseparable parts of this total biologic unit, and that the environment in which this unit functions determines many of its reactions, will necessarily be interested in society—that is, in the effect of the environment upon the health of the individual. Medical research can help to identify the types of social stresses that are apt to disrupt the functioning of the individual, and the physician can recommend alterations in social patterns which will reduce such stresses; but in our democratic system *society* must provide the means and methods of making the environment favorable.

Sometimes groups within our society take it upon themselves to alter the social environment without a reasonable basis for such action. There are some, for instance, who believe that a society in which things are "easy" is conducive to health—that is, that an individual's health and happiness are in inverse proportion to the amount of effort required for him to live. According to their theory, an easy life is less stressful. Unfortunately (or perhaps fortunately), this theory does not hold true. The biologic unit has certain energies that must be expended. When the expenditure of such energies is prevented, they are stored up and produce a powerful force which, if not properly released, can be very destructive to the body and to the mind. In my opinion, all people have a need or a drive to maintain self-esteem by contributing to the lives of others as well as to their own. If life is oversimplified, the opportunity to utilize energy in maintaining self-esteem may be restricted. A society which says to its citizens, "Take it easy; don't work. We will take care of all your needs," can destroy the only outlet that many people have for their energies, and thus lead to their illness and death. Medical science knows that people can die when they feel they have no purpose for living and no goal in life.

Factors Influencing the Life Span

Longevity is determined by a number of factors. Attempts have been made to demonstrate that the life span of mammals is related to body size: the larger the animal, the longer the life span. This theory breaks down when one considers the relatively short life span of cows, horses, and even elephants (90 to 100 years) as compared to that of man. On the assumption that aging begins with maturity, it has been postulated that the theoretical life span of a species can be calculated by determining the age at puberty and multiplying this figure by a constant (13). This hypothesis works out reasonably well for calculating the life expectancy of a mouse or a rat; but if man's adolescence is assumed to begin between 13 and 16 years of age, the expected life span of human beings would be 169 to 208 years. On the basis of this theory, many people have speculated that man's life span can be and should be greatly prolonged.

Other calculations of life expectancy are based on the ratio of brain weight to body weight, the length of gestation, the metabolic rate, and the pulse rate. Rough correlations exist for each of these variables, and provide interesting bases for speculations.

From recent experiments, it appears doubtful that a fixed life span exists for any particular animal. Immature rats kept on a diet adequate in the essential elements and vitamins, but deficient in calories, are delayed in growth and maturation. The average life span of these rats is considerably greater than that of rats given a diet sufficient to enhance growth and the onset of puberty.

While it is obvious that genetic factors influence longevity, much more information is required before their influence is completely understood. An example of some of the puzzling facts that have been uncovered is the finding that the life span of succeeding generations of rodifers, a small aquatic animal made up of approximately one hundred cells, can be greatly increased by selecting eggs from young mothers to propagate each generation. When eggs from old mothers are used, the life span declines sharply. In this experiment, at least, parental age is an important determinant of the life span. When eggs from the mother with a shortened life span are utilized *while she is still young*, the offspring will have normal longevity. This finding is taken as evidence that the shortened life span is not caused by a gene mutation. Apparently a hereditary but nongenic factor is responsible.

The influence of genetics on the human life span is difficult to evaluate. It does appear, however, that reasonable predictions of an individual's life expectancy can be made by utilizing a factor referred to as the

"total immediate ancestral longevity"—that is, the sum of the life span of his two parents and four grandparents. It should be made clear that at present we know of no gene responsible for extension of the life span, but do know that genes which increase susceptibility to malfunctioning and disease may shorten the life span.

Our present knowledge of the factors influencing longevity may be summed up as follows:

1. Life span appears to be related to rate of growth; accelerated growth is followed by accelerated aging.
2. It can be correlated to a reasonable extent with the ratio of body weight to brain weight, and with metabolism, heart rate, duration of gestation, and other physiologic factors.
3. It is influenced by the age of the mother and the life span of ancestors. While the hereditary determinant is largely nongenic, life-shortening genes may be passed on through successive generations.

The Aim of Medical Research in the Field of Aging

With advancing years, all of us become more subject to multiple ailments that interfere with interpersonal relationships, decrease employability, and necessitate prolonged periods of bed rest or hospitalization. Scientific advances have made it possible for a high percentage of our population to reach old age. This is surely a worth-while achievement, but it is now the responsibility of science and of society to improve the health status of our old people, so that they can contribute to society instead of becoming an excessive burden which seriously disrupts our way of life.

Public Health Monograph No. 30, published in 1955 by the United States Department of Health, Education, and Welfare, indicates a clear correlation between age and the frequency of different types of illnesses. Above the age of 45 years, three diseases—mental illness, heart disease, and arthritis—were, in that order, responsible for most of the disability measured in terms of *days lost from work*. After the age of 65, heart disease and arthritis were the leading causes of disability. In terms of *days in bed*, diseases of the heart led the list of disabling illnesses, being followed by nephritis, malignant neoplasm, and cerebral hemorrhage, embolism, and thrombosis. The two major causes for prolonged *hospitalization* were (1) diseases of the heart and (2) mental and neurologic diseases.

The incidence of various chronic diseases differs in the two sexes. Hospital admissions because of cerebral arteriosclerosis, for example, are more frequent among men, while senile dementia is a more frequent diagnosis in women for whom hospitalization is required. On the other hand, the four major causes of death are the same for both men and women past 65: (1) diseases of the heart, (2) cerebral hemorrhage, embolism, and thrombosis, (3) all malignant neoplasms, and (4) hypertension and arteriosclerosis.

In an effort to minimize or prevent changes associated with aging, and to eliminate diseases which reduce a person's power to think, feel, perceive, and respond, medical research is being directed less toward merely prolonging life and more toward increasing and maintaining the functioning efficiency of the mind and body. If this aim can be accomplished, more and more elderly people will be able to meet their own needs and to fulfill a meaningful role in society.

One of the first steps necessary in this program of research is to separate *disease* processes from the aging process *per se*. Atherosclerosis, for example—a condition that until recently was attributed to the aging process—is now known to be a metabolic disorder not necessarily related to aging, but affected by hereditary determinants and a host of other influences.

Medical Problems Created by Our Aging Population

Since the turn of the century the average life span in our country has been greatly increased. The remarkable decline in the death rate of infants during the past 50 years accounts for the fact that while the population of the United States has doubled, the number of persons over the age of 65 has quadrupled. There are between 15 and 16 million people in the United States above 65 years of age. By 1970 this number will be increased to approximately 20 million.

Increasing incidence of chronic diseases

Unfortunately, this remarkable increase in life expectancy has been accompanied by an increase in the number of individuals disabled by chronic disease or confined to a bed or an institution. More than one mil-



For as a plant turns leaf and bloom away from the dark and toward the sunlight, so will a wise man grow in the direction of enlightenment.

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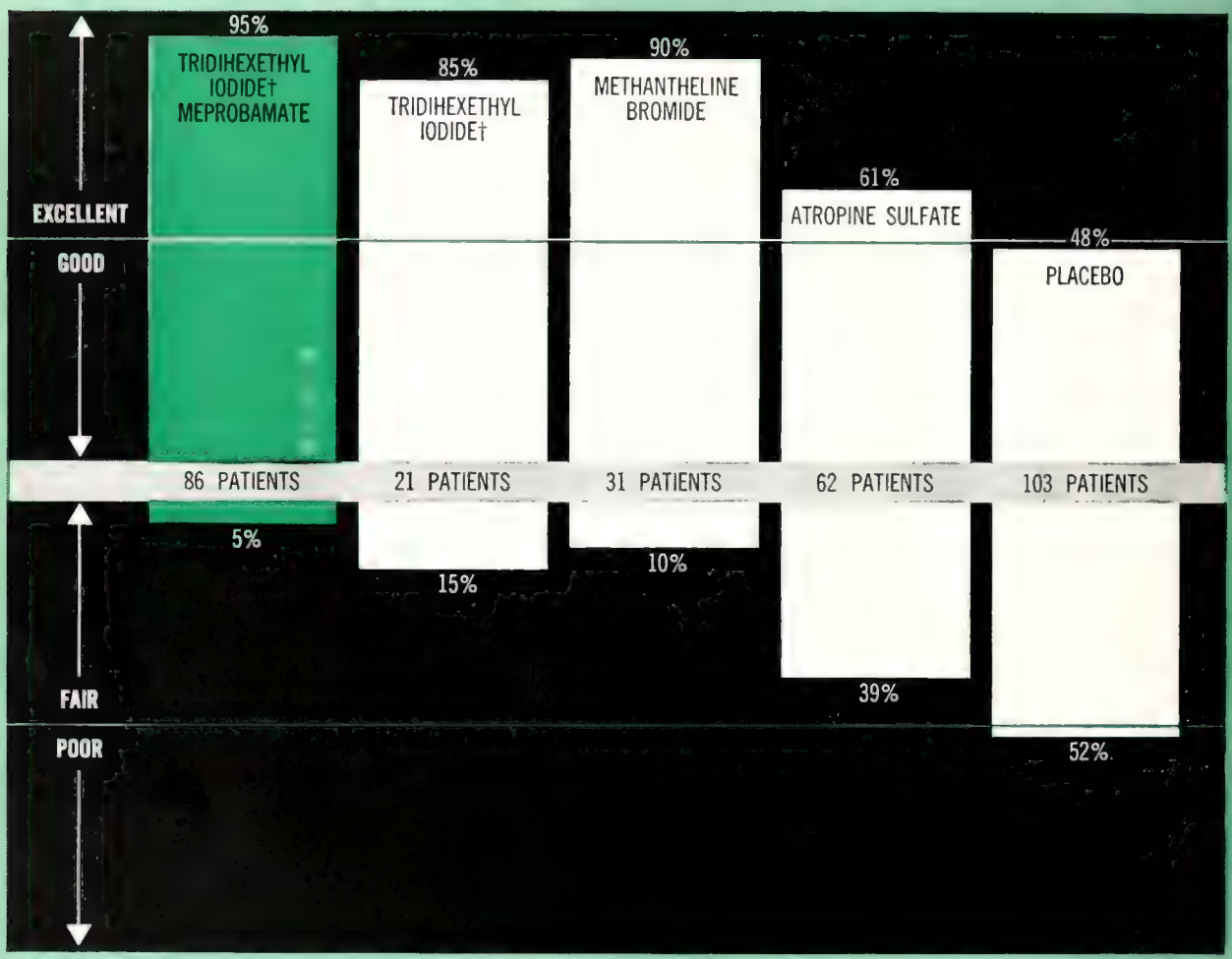
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DRY MOUTH	1%	5%	72%	46%	5%
STOMATITIS	1%	0%	28%	14%	0%
VISUAL DISTURBANCES	0%	0%	50%	34%	1%
URINARY RETENTION	0%	0%	18%	11%	1%
DROWSINESS	20%	0%	0%	0%	0%
COMPLICATIONS OR SURGERY					
HEMORRHAGE	0%	9%	3%	9%	10%
PERFORATION	0%	0%	0%	6%	0%
OPERATION	0%	5%	5%	14%	2%
RECURRENCES					
NONE	28%	23%	25%	17%	26%
FEWER AND MILDER	67%	62%	52%	37%	24%
SAME OR MORE	5%	15%	23%	46%	50%

*Atwater, J. S., and Carson, J. M.: Therapeutic Principles in Management of Peptic Ulcer. **Am. J. Digest. Dis.** 4:1055 (Dec.) 1959.

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			Annual Premium	Semi-Annual Premium	Annual Premium	Semi-Annual Premium
5,000	5,000 to 10,000	50.00 Weekly	$ 78.00	$ 39.50	$104.00	$ 52.50
5,000	7,500 to 15,000	75.00 Weekly	114.00	57.50	152.00	76.50
5,000	10,000 to 20,000	100.00 Weekly	150.00	75.50	200.00	100.50
5,000	12,500 to 25,000	125.00 Weekly	186.00	93.50	248.00	124.50
5,000	15,000 to 30,000	150.00 Weekly	222.00	111.50	296.00	148.50

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lion elderly people are now confined to hospitals. Although the age group over 65 comprises only 8 per cent of the population, it uses 18 per cent of the general hospital beds and 80 to 90 per cent of the nursing home beds.

The National Health Survey made in 1957 revealed a definite relation between age and the amount of time spent in bed or lost from work because of either acute or chronic disorders. A "restricted activity day" was defined as a day in which the customary activities were restricted for the entire day because of illness. A person was considered to have a day of "bed disability" if he spent all or most of the day in bed because of illness or injury. A day spent in the hospital was counted as a day of bed disability, whether or not the individual was confined to bed. The survey revealed that the annual number of days of both restricted activity and bed disability increased progressively with age (table 1).

Table 1

Age Group	Average Number of Days Lost Per Year	
	Restricted Activity	Bed Disability
25-44	14.2	4.6
45-64	21.1	6.4
65 plus	44.4	15.4

According to the same National Health Survey, the incidence of acute, disabling conditions declines throughout life, while the number of chronic diseases steadily increases. Consequently, there is an increasing need for medical facilities to care for the *chronically ill, long-term patient*, who does not require the expensive diagnostic and therapeutic equipment nor the intensive nursing services and specialized knowledge found in the general hospital. It is extremely important that steps be taken to fill the gap between the home and the general hospital by providing facilities for convalescent or chronically ill patients.

The Cost of Illness in Our Aging Population

The cost of illness among our aging population, both from the individual's viewpoint and from society's viewpoint, is nothing short of frightening. When I employ the word *cost*, I am not only referring to the financial cost, but am also thinking in terms of individual happiness and loss of social functions which in my opinion are equally crucial to the maintenance of our democratic way of life.

Report No. 20 of the United States Department of Health, Education, and Welfare, dealing with health costs of the aged, gives factual data that document the magnitude of the loss produced by illness in our aging population. In 1951 a nationwide survey of beneficiaries of old-age and survivors insurance disclosed that 31 per cent of all the beneficiaries surveyed were confined to bed by illness at some time during the year covered by the survey. Forty per cent of these patients spent more than four weeks in bed, either at home or in a general hospital or some other type of institution. Three and a half per cent of all the beneficiaries covered by the survey were completely bedridden, and one in seven required considerable assistance from others.

In Rhode Island a study was made of elderly citizens who were living outside of institutions. Forty-six per cent reported themselves as either being in poor health or having serious physical handicaps.

Health Insurance and the Problem of Motivation

In view of the high incidence of disease and disability in our elderly citizens, it is not surprising that the question of federal health insurance for the aged is one of the most vital social and political issues facing the United States today. In speeches and articles concerned with health insurance for elderly people, the words "comprehensive," "adequate," and "minimum" are used without clarification. The interpretations given such words may have considerable political value, but are not necessarily consistent with the actual medical-social situation. The two words *comprehensive* and *adequate* have a reassuring quality, but defining them is difficult. An "adequate" program of health insurance, for instance, can be interpreted to mean sufficient funds to cover the cost of *all* required medical care, or merely to *help* meet the cost of such care. An additional complication is the fact that medical costs are not consistent throughout the United States, and that the climate and living conditions frequently affect the decision for hospitalization, which increases the cost.

"Adequate" can also be used to imply a standard of medical care. Lack of manpower, facilities, and funds makes it impossible to provide the very *best* medical care for all our citizens. Clearly, "adequate" medical

care means less than the very best—but how much less?

The other word, *comprehensive*, recurs in all discussions regarding health insurance plans; but if we are to adopt the World Health Organization's definition of health—"a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity"—where does a comprehensive program of health insurance terminate?

Because of these difficulties in defining words, some people have learned to speak with caution. For example, Senator McNamara of the Senate Subcommittee on the Problems of the Aged and the Aging has said, "A program of comprehensive health insurance is required to meet the minimum health needs of the retired aged." The word *minimum* has a warning quality, but it is a more realistic word than *comprehensive* or *adequate*. Much effort has gone into attempts to define a minimum health program, but these attempts are frustrated by our lack of actual knowledge. Until we know what is really needed, it would be foolish and expensive to commit ourselves firmly to a rigid, long-term program of health insurance.

I wish to emphasize one basic factor which must be considered in the treatment of any illness, and is of utmost importance in the care of patients with chronic diseases. This basic factor is *motivation*—the desire within the individual to overcome his pain, limitations, and disabilities, in order to return to or achieve a position of personal and social independence.

Motivation is both a conscious and an unconscious psychologic phenomenon. Paradoxically, motivation that is consciously expressed can be in direct opposition to what is going on in the unconscious. Motivation is affected by certain forces within the individual and in the environment—forces that are bound to physical and personal needs, as well as to gains and losses. These gains and losses are related not only to the physical status of the individual, but also to his environmental and social circumstances—including, of course, his financial situation. In our society the striving for financial security and the attitudes which it develops form a part of motivation, and as such can affect the duration of hospitalization, enthusiasm for rehabilitation, length of convalescence, and request for medical care. All too often the desire for financial security can interfere with the incentive to get well. When illness provides a secure, dependent relationship, it is very hard for some individuals to work actively toward an independent existence.

From a medical standpoint this social attitude is unfortunate, but it must be faced. The experience of the Veterans Administration has clearly demonstrated that free medical care and disability pensions seriously interfere with motivation and prevent many patients from achieving a state of maximal functioning. Apparently for political reasons, very little has been done to educate the public concerning this situation, or to alter the situation itself.

Any plan to provide for the medical needs of the aged should take into consideration not only the most efficient methods of collecting and distributing funds, but also the importance of maintaining motivation. Fiscal policies should be secondary to this consideration. A program that interferes with motivation will prevent the health professions from achieving the goal we all wish to reach—better health for our elderly citizens. If we can achieve this goal, we will have a stronger nation.

Experience in the management of these patients who have successfully passed through an attack of cardiac infarction endorses the view that it should become a recognized procedure to direct the patient back to his work after he has rested for a month and convalesced for a second month. That no undue risks are incurred from the adoption of this practice has been proved by inquiry about the physical activities engaged in at the time of the initial attack or subsequent ones. In the great majority of cases the illness set in either at rest or while undergoing habitual easy exercise, and only exceptionally during unaccustomed heavy exertion.—Evans, W.: Faults in Diagnosis and Management of Cardiac Pain, Brit. M.J. 1:253 (Jan. 31) 1959.

Experiences in a Glaucoma Detection Clinic

CHARLES W. TILLETT, M.D.
CHARLOTTE

The purpose of this presentation is to relate the experiences of 10 ophthalmologists* in Charlotte in setting up a glaucoma detection clinic.

Glaucoma is the leading cause of irreversible blindness in adults in this country. Surveys have shown approximately 2 out of every 100 individuals over the age of 39 have the disease.

In its early stages, when it is most susceptible to treatment, the symptoms are few or non-existent. In its advanced stages, when the visual difficulties are all too prominent, treatment can only halt the progress of the disease. No known method of therapy can restore vision or visual field lost as a result of the increased intra-ocular pressure and its consequent damage to the optic nerve. It is thus extremely important to detect the disease early.

The starting point is in the physician's office. The use of routine tonometry in all patients over the age of 35 has become standard practice with the majority of ophthalmologists. But some patients are slow to seek eye care and some are treated by non-medical refractionists. These patients may acquire the disease undetected, reaching the ophthalmologist after the loss of vision has set in.

A glaucoma detection clinic focuses public attention on this important disease and permits the screening of a large number of individuals. Adequate publicity is an important factor in the success of such a clinic. The local medical society can help by such means as informative articles in the newspapers, small posters in drug stores, and spot announcements on radio and television. There is available from the National Society for the Prevention of Blindness an excellent 20-minute film on glaucoma, "Hold Back the Night", which can be shown to civic groups. Emphasis is placed on individuals 40 years of age and older, and those with a family history of this condition.

*Participating eye physicians were Drs. Reed Gaskin, Thomas D. Ghent, Walter Graham, M. J. Hough, Ruth Leonard, Marvin Lymberis, Henry Sloan, Jr., David Stratton, Jack Thurmond, and Charles Tillett.

The physical location of such a clinic is of some importance. It is desirable to have at least two examining tables and reasonably large waiting room facilities so that a large number of patients can be seen. Where a number of individual ophthalmologists are practicing in a community, it is desirable to locate the clinic where it is not specifically identified with any individual or group. Charlotte eye physicians have been fortunate in having available the facilities of the emergency outpatient clinic at the Mercy Hospital. More recently the city-county health department building has been utilized.

Personnel is another important factor in the success of such a clinic. Our medical auxiliary has been of considerable help in the registration of patients, preparing small 5 x 7 inch cards for each patient's name, age, and address. The National Society for the Prevention of Blindness has chapters in a number of communities throughout the state, and their assistance has been invaluable in operating our clinic and in follow-up services. The health department, which has been most cooperative, has provided the services of two nurses at all times. The nurses helped the patients during the examination onto the examining table and down again and instilled pontocaine eye drops, thus enabling us to see many more patients than otherwise would have been possible.

The examination itself consisted of measuring the tension in each eye with a tonometer and in performing an ophthalmoscopic examination. Any patient with a tension of 24 mm. of mercury or higher was advised to see an ophthalmologist, as were patients in whom ophthalmoscopic examination revealed abnormal cupping of the optic nerve even though the tension was normal. Other patients, found to have cataracts, macular disease, retinopathy, or other eye diseases, were likewise advised to see a specialist.

The manner of scheduling a glaucoma detection clinic has varied in different parts of the country. In some communities the clinic has been held during one full day. In

others, various industrial plants have been screened. Our particular clinic was held for a full week, with hours from 9:00 A.M. to 5:00 P.M. Monday through Friday. Each of the participating physicians contributed at least half a day, and many contributed additional time when the case load required it. With the help of the nurses and others it was possible for one examiner to see as many as 30 to 40 patients an hour at peak hours. On a few occasions when the case load was greater than could be handled, ophthalmoscopic examination was omitted and 60 or more patients per hour were seen per examiner.

Results

Clinics have been held in three successive years. Seven hundred patients were screened in the first year and 800 in the second. This number increased to 3,000 in 1959. The patients were predominantly in the 40 or older age group.

In the first two years 4 per cent of the patients had an elevated tension. Statistics on the most recent clinic (1959) indicate that 4.5 per cent of the patients (135 out of 3,000) had an elevated tension. Although follow-up data are not complete, it is estimated that half of these patients proved to have glaucoma. Clinics of this type elsewhere in this country have had similar results.

Summary

1. A week-long glaucoma detection clinic has been held three successive years by ten eye physicians in Charlotte.
2. The total number of individuals screened increased from 700 in 1957 to 3000 in 1959. These patients were predominantly over the age of 39.
3. Approximately 4 per cent of patients tested showed an elevated intra-ocular tension. It is estimated that half of these, or 2 per cent of the total, proved to have glaucoma.

SPECIAL REPORT

ANALYSIS, REVIEW, AND EVALUATION OF CLINICAL PRACTICE IN THE HOSPITAL

RESPONSIBILITY

Only physicians are capable of judging what is or what is not good medical practice. Patients and hospital personnel may learn to recognize good practice, but only the physician can accurately evaluate its quality.

The opinions of individual physicians vary and rightly so. For that reason, the Commission places heavy emphasis on group participation in evaluating clinical practice. It is the responsibility of the entire Active Medical Staff to analyze, review, and evaluate the clinical practice in the hospital and to insist on high standards of performance from each of its members.

This responsibility is not easily discharged. It requires hours of work which the busy physician can ill afford to spend and which is usually done at the expense of his personal pleasures. It requires an objectivity which is perhaps even more difficult to achieve. To judge the work of a colleague on a fair, unbiased, impartial level calls for the intelligence and wisdom of a Solomon. That this is so well done in thousands of hospitals can be attributed to the integrity, effort, and persistence of each member of the medical staff.

ESSENTIALS

In order to evaluate clinical practice the following are essential:

1—Reliable Medical Records

There must be evidence on the medical record that the diagnosis was made on the basis of information given by the patient in the history, a careful physical examination, and a scientific interpretation of the findings. There must be sufficient data recorded to justify the physician's treatment of the patient and the results. For the sake of both the group whose responsibility it is to review the record and the physician whose performance is being evaluated, a good medical record is indispensable.

2—Reliable Reports of Diagnostic Tests

The physician must rely on the accuracy of reports on laboratory and diagnostic tests. The medical staff cannot supervise all these areas, but it has a responsibility to make certain that there is supervision. This is done by recommending the appointment of qualified individuals to head these departments and to designate those on the staff qualified to interpret electrocardiograms, x-rays, and other diagnostic tests. If laboratory work is done outside the hospital, it must be made certain that these laboratories are government approved, licensed, and under the direct supervision of a pathologist.

3—An Organized Medical Staff

To insure a continual orderly process of evaluating clinical practice the medical staff must be formally organized. This provides a framework in which duties and functions of the staff can be carried out. The medical staff may decide to delegate the responsibility of clinical review to committees, to clinical departments, or to the staff as a whole. Only the individual medical staff can determine the method which will be most effective in the local situation.

4—A Competent Medical Staff

Though listed fourth, the most important factor in evaluating clinical practice is a competent medical staff. The quality of medical care in the hospital is in direct ratio to the knowledge, experience, and ability of the members of the medical staff. The judgment necessary to evaluate clinical practice depends entirely on the ability of those who are doing the evaluating.

This makes the appointment to the staff and the delineation of privileges so important. To do this fairly and objectively, the medical staff should set up a system to evaluate each applicant and determine his hospital privileges on the basis of professional competence. Individual character, training, experience, and ability should be criteria for selection. Under no circumstances should the accordance of staff membership or professional privileges in the hospital be dependent solely upon certification, fellowship or membership in a specialty body or society. Neither should appointments be denied on the basis of hospital bed capacity or selfish competitive motives on the part of the staff.

Although the primary purpose of clinical review is to achieve and maintain high standards of patient care, the process also serves as a means of evaluating the performance of individual staff members. The judgment, ability, and competence of a staff member can be assessed by his methods of diagnosis, his skill in treatment, and his ability to recognize situations which call for consultation. These facts should influence the decision to extend or limit his hospital privileges. Each member of the staff should be given the opportunity to realize his full capabilities, and at the same time safeguards must be established to protect patients. By good clinical review both patient and and staff member profit.

The Commission in accrediting a hospital places great emphasis on the extent and care with which the medical staff reviews and evaluates clinical practice. Since good medical records, reliable diagnostic services, and a competent, well organized staff are essential for good clinical review, these factors are closely surveyed. To be accredited, there must be evidence that the hospital medical staff is living up to its important responsibilities.

/s/ Kenneth B. Babcock, M.D.
Director
Joint Commission on
Accreditation of Hospitals

Report from The Duke University Prison Control Center

Jay M. Arena, M.D., *Director*
Durham

KEROSENE, GASOLINE, AND PETROLEUM DISTILLATES

Kerosene, together with other petroleum products, accounted for more than 100 deaths in 1949-50, a fourth of all fatal poisonings among children under 5 years of age in the United States. Of 252 children admitted to Charity Hospital in New Orleans over a 10-year period for kerosene poisoning —the commonest cause of poisoning among admissions—9 died. The incidence of poisoning from petroleum products, principally kerosene, in 12 Southern states is four times greater than that in other areas. In the South kerosene is extensively used for curing tobacco, heating, cooking, and, in more remote areas, for lighting. This product is often removed from its original container and put into an empty cola bottle, which is often carelessly left about where toddlers do not hesitate to sample it.

Signs and Symptoms

Hydrocarbon ingestion causes symptoms in two organs systems: the central nervous system and the lungs. In addition, it has a direct irritative action on the pharynx, esophagus, stomach, and small intestine, with edema and mucosal ulceration. Depression of the central nervous system occurs soon

after ingestion, followed by severe pneumonitis in a few minutes to several hours. Death, when it occurs, is from pulmonary insufficiency, not the depression of the central nervous system. Histopathologic examination of the lungs shows primarily a severe necrotizing pneumonia. If the patient recovers, no late sequelae are seen. The great seriousness of kerosene poisoning, therefore, lies in the pulmonary damage.

How this damage comes about as a result of swallowing even a small amount of the liquid has been the subject of controversy. One explanation is that the child aspirates some kerosene either directly or in the course of vomiting or gastric lavage. An opposing idea is that kerosene is absorbed from the gut and excreted by way of the lung—but this theory has the defect that kerosene placed in the stomach of experimental animals fails to produce any striking pulmonary injury. Richardson showed that in rabbits 0.25 ml. of kerosene per kilogram of body weight could cause fatal pneumonia when injected directly into the trachea. Thirty milliliters per kilogram was necessary to produce the same effect when instilled by nasograstric tube into the stomach, and since the rabbit does not vomit, it was assumed that the hydrocarbon must reach the lung via the blood stream. If these values can be applied to children, a child weighing 10 Kg. would have to ingest 12 ounces of hydrocarbon to produce a fatal pneumonia if no aspiration occurred, whereas only 2.5 ml. could prove fatal with aspiration.

The clinical picture produced by kerosene is quite variable. Symptoms appear early and consist predominantly of either cerebral depressive effects or respiratory manifestations or, in some children, both at once.

The child may be found coughing and choking, and with the odor of kerosene on the breath or clothing. If some time has elapsed following ingestion, he may be drowsy, stuporous or in frank coma. In one series, 6 of 101 patients were found unconscious; about 50 children had vomited. Fever (sometimes high), tachycardia, and tachypnea develop in most patients. Signs of pulmonary involvement include dyspnea and cyanosis, with rales, rhonchi, dullness and diminished breath sounds at one or both lung bases. Following massive aspiration, pulmonary edema may be marked, and is usually the cause of death. Most patients are acutely ill, but those with slight pulmonary manifestations often recover in 24 to 48 hours. Those with combined cerebral and pulmonary involvement are more acutely ill, and it is among these that cardiac dilatation, transient hepatosplenomegaly and abnormal urinary findings are found.

Roentgenographic changes can be seen within an hour or two of ingestion. At first there are multiple, small, patchy densities with ill defined margins; in more advanced cases the lesions become larger and tend to coalesce. Emphysema may develop. Pneumothorax occasionally occurs. The maximum changes are noted in two to eight hours after ingestion. Among patients who survive, resolution is gradual, the lungs clearing in three to five days, with radiologic signs lagging behind the clinical improvement.

Treatment

Treatment of kerosene poisoning is nonspecific and symptomatic. One or two ounces of mineral or vegetable oil by mouth (if not forced) would tend to prevent the absorption of kerosene as well as hurry it through the intestinal tract. In the presence of pulmonary signs, oxygen is the "most valuable agent" to relieve respiratory distress and anoxia. Antibiotics should be administered in therapeutic doses to forestall secondary pulmonary invaders, even in the absence of overt pulmonary signs and symptoms, since pulmonary involvement can occur without clinical signs. The use of steroids as an anti-inflammatory agent in the treatment of necrotizing pneumonitis has proven to be very effective, and should be used for any severely ill and toxic patient. Appropriate therapy is indicated for fluid and electrolyte imbalance. Attempts to keep stuporous children awake by exercise have no rational basis.

On the basis of Richardson's experiments (see under Signs and Symptoms), as well as of clinical studies suggesting a more severe pneumonia in patients who had spontaneous or induced vomiting with this type of poisoning, it would appear that treatment without lavage or emesis is preferable. Lavage, if used, however, should be done with extreme care. The head and chest should be lowered, copious amounts of water or a 3 per cent solution of sodium bicarbonate or normal saline should be used and the tube pinched off and quickly withdrawn.

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NOVEMBER, 1960

FALL MEETING OF THE EXECUTIVE COUNCIL

The regular fall meeting of the Executive Council of the State Medical Society was held on Sunday, October 2—at the end of a three-day conclave of committees—at the Mid Pines Club at Southern Pines. A tremendous amount of work was accomplished in these three days. The long agenda of the Executive Council concluded with reports of the six commissions, which largely constitutes the summary of membership work and effort of the Society. Most of the committee work was summarized by the chairmen of the commissions in their reports. A few of the more important committee reports were given by the chairmen of the respective committees, in order to lend emphasis and detail to the subject matter involved and studied.

The conclave and Executive Council meeting were well attended. President Amos Johnson was an admirable presiding officer, guiding the discussion skillfully through a long agenda and the handling of the difficult questions which arose.

A matter of greatest interest was the subject of a report of the reactivated committee to study the question of scientific membership, of which Dr. Street Brewer is chairman. The Council unanimously adopted the committee's recommendation re-affirming the Society's stand on scientific membership as now expressed in its Constitution and By-laws, and adopted a motion that the Mecklenburg County Medical Society be asked to clarify its position on membership for Negro physicians. Another motion was also passed that the President, the Secretary, and Mr. John Anderson prepare a form to be used in applying for membership in the Society. It is proposed that applications should read something like this: *I hereby apply for a.....membership in the Medical Society of the State of North Carolina.* The blank would be filled in by one of two terms specified by our Constitution (Article IV, section 1)—Active or Scientific.

Drs. Paul Whitaker and Ben Royal, who were on the original committee with Dr. Brewer, corroborated his statement that the Negro medical leaders who met with their committees five years ago had broken faith with the committee, for they had agreed that the proposed scientific membership was all that they could and did ask for, and that they were well satisfied with it in their proposals. Only two Negro physicians, however, have applied for this membership, and they were both formally castigated by members of the Old North State Medical Society.

Dr. Wayne Benton, chairman of the Committee on Finance, reported that the Society now had a $96,000 surplus and that investments had paid 5 per cent during the past year. So many life members had asked for refunds of their dues that the committee recommended that all who had been listed as life members have their dues refunded. A number of the Executive Council members, however, stated that they did not wish their dues to be refunded—so a motion was passed allowing all life members the privilege of paying dues so long as they wished. Dr. Benton reported that the Building Committee was still functioning.

Both the Committee on Legislation and Chronic Illness recommended that steps be taken as soon as possible for North Caro-

lina to take advantage of the provisions of the Mills Act to provide medical care for its older citizens. A resolution to that effect was passed unanimously, copies of which are to be sent with accompanying letters to Governor Hodges and Dr. Ellen Winston, Commissioner of Welfare.

Dr. Jacob Shuford, chairman of the Committee on Blue Shield, reported that this committee had approved the Hospital Care Association, as well as the Hospital Saving Association, to sell Blue Shield Insurance, but that the National Blue Shield did not approve Hospital Care Association for Blue Shield, because they thought Blue Shield should be managed by a single agency in a given territory or jurisdiction—not overlapping. This committee recommended, therefore, that a corporation of the Medical Society be created to coordinate the efforts of the Hospital Care Association and the Hospital Saving Association, and to control the Blue Shield insurance. The motion was passed unanimously.

Dr. W. A. Sikes, superintendent of the State Hospital in Raleigh, said that some doctors had been too lax in meeting requirements of the law in committing patients to the State Hospital. Although the law states plainly that the doctor shall examine the patient before commitment, some have been prone to sign papers without an examination. Others have been admitted under classification as drug addicts rather than alcoholics, because the drug addict may be kept in the hospital 60 days, the alcoholic only 30. Still another error of omission was to have the patient admitted as an emergency without an examination. Many of these technical violations may result in liability actions later on.

Dr. Oscar E. Goodwin of Apex was elected to fill Dr. Earl Brian's unexpired term as a member of the State Board of Health, terminating in June 1963.

Two medical district councilor vacancies occurred as the result of Dr. Claude Squire's election as president-elect and of the resignation of Dr. Merle D. Bonner of the Eighth District. Dr. Bonner had insisted that his resignation be accepted. These vacancies were quickly filled by promoting the vice-councilors—Dr. Edwin Bivens of Albemarle for the Seventh and Dr. Harry Johnson of Elkin for the Eighth.

Mrs. J. M. Hitch, president of the State Women's Auxiliary, was in Chicago for a meeting, and her husband read her excellent report to the Council, reviewing the activities of the Auxiliary this year. The Auxiliary has taken an active part in emphasizing the American Medical Education Foundation. In this effort the ladies are promoting the sale of Christmas cards. They have been disappointed at the response so far—and hope that their husbands will join them in pushing the sale of these cards. All the profit goes to the A.M.E.F.

The final action of the Council was an evaluation of the conclave method of coordinating activities of the various committees. All present agreed that it was the most satisfactory and efficient method and recommended that it be continued, with the provision that the Executive Secretary and the President-elect be empowered to select meeting places for the Fall Conclave and the Officers' Conference in time to secure suitable accommodations.

* * *

AUXILIARY CHRISTMAS CARDS

The Woman's Auxiliary of the State Medical Society has long been interested in the American Medical Education Foundation. This year the Auxiliary has undertaken the ambitious project of selling Christmas cards as a means of raising money for this worthy cause. Mrs. Loftin H. Harris, chairman of the A.M.E.F. committee, has a goodly supply of these Hallmark cards on hand, to be sold to Auxiliary members for $2.25 per box of 25 cards, and resold for $3.50 per box, or 14 cents a card. The profit is to go to the A.M.E.F.

The cards are really good looking. Two pine cones tied with red ribbon are on the front. On the inside is the traditional "Merry Christmas and Happy New Year" opposite the legend, in small letters, "This card has been selected in the interest of the American Medical Education Foundation." They compare favorably with others that are purely commercial.

The Auxiliary invested a good deal of money in this venture. Since Christmas cards are a necessity at this time of the year, let all good doctor-husbands come to the aid of their wives, and boost the sale of the A.M.E.F. cards.

INFLUENZA IMMUNIZATION URGED

Since the devastating 1918-19 pandemic of influenza there have been annual epidemics of gradually decreasing severity. In 1957-58, however, the so-called Asian strain of influenza was more severe and caused many more deaths than had been the case for a number of years. Surgeon General Burney appointed an Advisory Committee on Influenza Research. This committee found that the lack of resistance and its widespread occurrence caused the high mortality, especially in the chronically ill, the aged, and in pregnant women. As a result of these findings, the Public Health Service is urging a continuous program of immunizing the high-risk groups routinely. The Public Health Service lists the high-risk groups as follows:

1. Persons of all ages who suffer from chronic debilitating disease, in particular: (a) rheumatic heart disease, especially mitral stenosis; (b) other cardiovascular diseases, such as arteriosclerotic heart disease or hypertension—especially patients with evidence of frank or incipient insufficiency; (c) chronic bronchopulmonary disease, for example, chronic asthma, chronic bronchitis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema, or pulmonary tuberculosis; (d) diabetes mellitus; (e) Addison's disease.

2. Pregnant women.

3. All persons 65 years or older.

The vaccine advised is polyvalent and the dosage recommended is 1.0 cc. subcutaneously, repeated after an interval of two months or longer. Many doctors prefer a two-week interval, but the committee has given much thought to the longer interval between doses. The committee adds, "Preferably the first dose would be given no later than September 1 and the second before November 1." Unfortunately, the statement was not received in this office until the last of October. It is never too late to do good, however, and the conscientious family doctor should urge his high-risk patients to be immunized as soon as possible. Persons previously immunized with polyvalent vaccine should get a single booster dose each fall—prior to November 1.

Those of us who remember the terrific toll taken by the 1918 epidemic can appreciate the importance of immunization.

The following pharmaceutical houses are licensed manufacturers of influenza vaccine: Lilly, Lederle, Merck, Sharpe, and Dohme, National Drug Company, Parke-Davis, Charles Pfizer, and Pitman-Moore.

DR. JOHN E. DONLEY

The **Rhode Island Medical Journal** reports with sorrow the death, on September 17, 1960, of Dr. John E. Donley, distinguished Editor-in-Chief of the **Journal**, a past President of the Rhode Island Medical Society, and the only Rhode Island recipient of the Dr. Charles Value Chapin Award of the City of Providence.

The **Journal** also announces that the House of Delegates—assembled in meeting on September 28, 1960, elected Dr. Seebert J. Goldowsky as the new Editor-in-Chief of the Rhode Island Medical Journal to succeed the late Doctor Donley. Doctor Goldowsky has been an Associate Editor of the Journal for many years.

John E. Farrell, Sc.D.
Managing Editor

Although Rhode Island is the smallest state in the Union, its medical journal is one of our favorite exchanges. It has consistently maintained a high standard of original articles and of editorial content. Dr. Donley was a worthy successor to the brilliant and lovable Peter Pineo Chase, who died in harness April 23, 1956. Now Dr. Goldowsky has a large pair of editorial shoes to fill—but no doubt will keep the Rhode Island Medical Journal on the same high level as his predecessors. He does not come as a novice, since for many years he has been an associate editor.

The NORTH CAROLINA MEDICAL JOURNAL extends to the Rhode Island Medical Society sympathy in the loss of Dr. Donley, and congratulations on having a capable successor in Dr. Goldowsky.

* * *

YALE SCHOOL OF MEDICINE CELEBRATES SESQUECENTENNIAL ANNIVERSARY

The September issue of *Connecticut Medicine* is devoted to the sesquecentennial anniversary of the Yale University School of Medicine. The celebration is to be held October 28-29. The entire issue of the September *Connecticut Medicine* contains a number of articles dealing with this great school.

The NORTH CAROLINA MEDICAL JOURNAL takes great pleasure in congratulating both the school of medicine and the medical journal—and wishes for both the best of everything in the years to come.

President's Message

Where Does Charity Stop ?

Recently, your State Medical Society, through the unanimous action of its executive Council, adopted the principle of cooperation with state and federal governmental agencies to provide medical care for our indigent and "medically indigent" citizens in the 65 and over age group. This was deemed proper and is in keeping with policies advanced by the American Medical Association. Copies of the adopted resolutions were sent to Governor Hodges, Commissioner of Public Welfare, Dr. Ellen Winston, and other state agencies urging the immediate and total implementation of this Federal legislative action.

The Committee on Chronic Illness, John R. Kernodle, M.D., chairman, is charged with liaison with governmental agencies dealing specifically with implementing this legislation. The Committee Advisory to the North Carolina State Board of Public Welfare, J. Street Brewer, M.D., chairman, as in all matters pertaining to medicine and welfare, will also act in advisory capacity in this proposition.

Presently, North Carolina is not implemented and participant in this federal program. Parts of the program we may participate in without additional state legislation; other and important facets of participation will require new local state legislation. Already, 5 of our 50 states are total participants. Following action by your Executive Council, the State Medical Society has offered full cooperation and support to Governor Hodges and to Commissioner Winston in getting this project immediately under way.

Recently, in discussions between Commissioner Winston and Dr. Kernodle pertinent to this assistance program, a matter of vital importance to all North Carolina doctors was unearthed. This I shall attempt to present to you clearly.

Bluntly, but factually, this issue is—Shall medical services furnished in this state in compliance with the federal legislation be furnished by us "for free," or, shall we receive reasonable payment for services rendered these patients, as a service of the federal and state government, on a vendor payment basis as provided for in this legislation?

Commissioner Winston has given thought to this proposition. I quote from Dr. Kernodle's report of his conference with Commissioner Winston

> She asked whether the doctors were going to change their idea of accepting payment for indigent patients and whether vendor payment schedules should be set up for the doctors. She inquired on the point that doctors had, in the past, offered and likewise had given their services free for all indigent patients.—She then stated that she would hope we would not (request payment) but if we did, she felt that we should also set up a scale for the OAA group.

Now, we are at the crux of this problem. Policies which we set here will be vital to medicine in North Carolina in years to come. The pattern we cut in this instance will be used to "size" us in each instance as this program is inevitably expanded.

As Dr. Winston recognized above, "Doctors had in the past offered and likewise had given their services free for all indigent patients." This is true and, I believe, will remain true so long as the charitable care of these indigent patients remains in its traditional and proper perspective. That is, that they are, in sequence, a responsibility of their family, their community, and then their local governmental agencies. This is an instance of "From him who has, according to ability—to him who has not, according to need." This constitutes basic charity and is good. Under these circumstances we will give amply of our basic commodity, medical care, and of ourselves as a charitable service to our fellow man.

When the responsibility for medical care, among other responsibilities, of the indigent and "medically indigent" is assumed by agencies of the state and federal governments, then the proposition of charity alters its position. These people then become the wards, proportionally equally, of all those who are taxed to support government. To the proposition, "From him who has, according to ability—to him who has not, according to need," now add, "by force," and you see this is no longer charity. This is compatible with the Marxist theory of communism.

As doctors, we are required to pay our proportionate share of taxes just as are all others who earn by their efforts or ingenuity. A proportionate share of the money appropriated to finance this welfare legislation, which in itself asks for no charity, thus was exacted from us as doctors. Therefore, logic should hold that purveyors of medical services should be compensated for their services commensurate with all other participant in such a program.

I would like for every member of our Medical Society to be aware that shortly, within weeks, policy must be established which will be the pattern, for years to come, of remuneration for medical services rendered the wards of government by you as doctors. Dr. John R. Kernodle of Burlington and Dr. J. Street Brewer of Roseboro will be high among those who will make this decision for you. Those of you who have interest in the present and future of medicine and your Medical Society should feel free to communicate your thoughts and ideas concerning this matter to either Dr. Kernodle or Dr. Brewer.

AMOS N. JOHNSON, M.D.

BULLETIN BOARD

COMING MEETINGS

Duke University Medical Center, Lectures on Ophthalmology—Eye Clinic, Duke Hospital, Tuesday evenings, 7:30 p.m.

American College of Physicians, Regional Meeting—Duke University Medical Center, Durham, December 1.

North Carolina Health Council, Annual Meeting—N. C. State College Union, Raleigh, December 7.

University of North Carolina School of Medicine, Postgraduate Sessions in Pediatrics, Ophthalmology, Medicine, Surgery, Obstetrics and Gynecology—Edenton, Wednesdays, beginning January 11; Kinston, Thursdays, beginning January 12.

Governor's Conference on Occupational Health—Raleigh, January 26, 1961.

North Carolina Mental Health Association—Sir Walter Hotel, Raleigh, February 17-18.

Emory University Postgraduate Course in Ophthalmic Surgery—Grady Memorial Hospital, Atlanta, December 1-2.

Postgraduate Conference on Pediatric Urological Problems, sponsored by the University of Virginia School of Medicine—Charlottesville, December 2.

Southern Surgical Association, Annual Meeting—Boca Raton, Florida, December 3-8.

Gill Memorial Eye, Ear and Throat Hospital, Thirty-fourth Annual Spring Congress—Roanoke, Virginia, April 10-15, 1961.

NEW MEMBERS OF THE STATE SOCIETY

The following physicians joined the Medical Society of the State of North Carolina during the month of October:

Dr. Robert Lowell Dame, 214 Ridgeway Avenue, Statesville; Dr. Pleasant Paul Deaton, Broughton Hospital, Morganton; Dr. Dockery Durham Lewis, Jr., 942 Davie Avenue, Statesville; Dr. Albert Hopkins Fink, Banner Elk; Dr. John Ashley Goree, Duke University Medical Center, Durham; Dr. E. Carwile LeRoy, 106 Fort Washington Avenue, New York 32, N. Y.

NEWS NOTES FROM THE DUKE UNIVERSITY MEDICAL CENTER

Plans for a multi-million dollar clinical research program that will be a major development at the Duke University Medical Center have been announced by Dr. Deryl Hart, president of the University.

Total cost of the project during its five years of operation will be approximately $3,111,000.

This includes U. S. Public Health Service funds expected to total $1,581,000 for support of the program during its first five years. Facilities will be housed in a new Medical Center addition that will cost an additional $1,530,000 provided by the Public Health Service and private sources.

Explaining the purpose of the undertaking, Duke Medical School Dean Barnes Woodhall said that clinical research is concerned with "the careful study of what takes place in various disease states" and with "precise evaluation of the effectiveness of new drugs and treatment methods."

Dean Woodhall said that the program was organized under the direction of Dr. Frank L. Engel, professor of medicine, who will continue to serve as its head until the appointment of a permanent director and an associate director next year.

Duke is one of 11 institutions over the nation selected by the Public Health Service for establishment of clinical research centers. Another is the University of North Carolina.

* * *

A symposium on Malignant Disease with four noted cancer authorities as guest speakers was held at the Duke University Medical Center on October 28.

Co-sponsoring the symposium with the Duke Medical Center was the Durham County unit of the American Cancer Society.

Speakers were Dr. J. A. del Regato, director of Penrose Cancer Hospital, Colorado Springs, Colorado; Dr. Lee Clark, Jr., director and surgeon-in-chief of M.D. Anderson Hospital, Houston, Texas; Dr. Lauren V. Ackerman, professor of surgical pathology at the Washington University School of Medicine, St. Louis, Missouri; and Dr. John V. Blady, clinical professor of surgery and director of the tumor clinic at the Temple University Medical Center, Philadelphia, Pennsylvania.

Three new faculty members have been appointed in the Biochemistry Department of Duke University Medical Center. Dr. R. Taylor Cole, Provost of the University, announced recently.

Dr. Charles Tanford has joined the faculty as professor of physical biochemistry; Dr. Ralph E. Thiers as associate professor of biochemistry and associate director of Duke Hospital's clinical chemistry laboratory; and Dr. Walter R. Guild as associate professor of biophysics.

The promotion of Dr. Robert W. Wheat from associate in biochemistry to assistant in biochemistry to assistant professor of biochemistry also was announced.

* * *

George B. Kantner has been appointed personnel director at the Duke University Medical Center, hospital superintendent Charles H. Frenzel announced recently. He will be responsible for administration of personnel policies, recruitment, and screening of job applicants and development of improved personnel programs for the Medical School.

* * *

Dr. John E. Dees, professor of urology at the Duke University Medical Center, was elected president of the North Carolina Urological Association during the Associations 1960 meeting held in Roaring Gap. He will hold office for two years, succeeding Dr. Oliver J. Hart of Winston-Salem.

Other new officers are vice-president, Dr. Bruce Langdon of Fayetteville; and secretary-treasurer: Dr. Jack Hughes of Durham.

* * *

A Duke University chemist, Dr. Peter Smith, has joined the ranks of scientists engaged in research which may help lessen the damaging effects of radioactive materials on human beings.

Dr. Smith work for the three-year period ending on September 30, 1963, will be supported by a $62,030 financial commitment from the National Institutes of Health Service.

News Notes from the University of North Carolina School of Medicine

A new method for "seeing" and studying the human spleen, developed at the University of North Carolina School of Medicine, was described this month in Atlantic City at the 61st annual meeting of the American Roentgen Ray Society.

The scientific presentation was made by Dr. Philip M. Johnson, who was a faculty member of the UNC School of Medicine up to the time of his resignation last month. The co-scientists on the project were Dr. Ernest H. Wood, professor of radiology, and Dr. Stewart L. Mooring, assistant in radiology, both of the UNC School of Medicine.

This work was carried out in Dr. Johnson's laboratory at the UNC School of Medicine and was supported by a grant from the U. S. Public Health Service.

An FM radio device which broadcasts the heartbeat of patients—and has been used in dozens of instances at N. C. Memorial Hospital has won first prize in a national medical exhibition in New York.

Faculty members of the School of Medicine put on display at the annual meeting of the American Society of Anesthesiologists a frequency modulation broadcasting technique designed at the medical school in Chapel Hill. It is a recent adaptation of widely employed principles of radio telemetry to use in the operating room.

A description of the technique whereby a patient broadcasts his own heart signals from the operating table is described in a report entitled "Radio Telemetry in Physiological Monitoring" by Drs. David A. Davis, Doris C. Grosskreutz, Kenneth Sugioka and Mr. William Thornton. The application of radio telemetry for this purpose has been developed within the past year.

* * *

Two associate professors of surgery at the University of North Carolina School of Medicine participated at the annual meeting of the American College of Surgeons at San Francisco recently.

Dr. C. G. Thomas, Jr., presided at the forum session of the 1960 Clinical Congress at A.C.S. meeting.

Dr. Erle E. Peacock read a paper on "The Effects of Some Rate Regularity on the Synthesis of Collagan in Healing Wounds."

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A one-day seminar for physicians on the prevention and management of athletic injuries was held at the University of North Carolina School of Medicine Wednesday, Sept. 21. Some 100 doctors, most of them physicians for football teams attended.

* * *

Eight faculty members of the University of North Carolina School of Medicine participated in the annual meeting of the Southern Medical Association in St. Louis, October 31-November 3.

A meeting of the U.N.C. Medical Alumni Association was held in connection with the Association's meeting. The speakers at the alumni meeting were Dr. John T. Sessions, Jr., UNC associate professor of medicine, and Dr. John S. Rhodes, president of the Medical Alumni Association. Dr. Joseph M. Hitch of Raleigh, UNC clinical professor of medicine, presided at the alumni session.

The faculty members who took part in the scientific sessions of the medical meeting were Dr. Sessions; Dr. A. Stark Wolkoff, assistant professor of obstetrics and gynecology; Dr. Robert A. Ross, professor and head of the Department of Obstetrics and Gynecology; Dr. Samuel D. McPherson, Jr., clinical professor of surgery (ophthalmology); Dr. H. Robert Brashear, Jr., associate professor of surgery (orthopedics); Dr. Robert D. Langdell, associate professor of pathology and U. S. Public Health Service Senior Research Fellow, and Dr. Robert A. Gregg, clinical associate professor of preventive medicine.

A two-day program on cystic fibrosis was held in the Clinic Auditorium of the University of North Carolina School of Medicine on Thursday-Friday, Oct. 20-21.

Presented for doctors, nurses and physical therapists, the program was sponsored by UNC Section of Physical Therapy in cooperation with the Department of Pediatrics and the Department of Medicine.

* * *

The annual University of North Carolina School of Medicine Symposium was held at N. C. Memorial Hospital Thursday and Friday, November 17-18. The subject for the symposium was Gastroenterology.

The guest participants on the program were Dr. Eddy D. Palmer, lieutenant colonel, Brooke General Hospital, Fort Sam Houston, Texas; Dr. Edward E. Owen, associate in medicine, and Dr. Malcolm P. Tyor, associate professor of medicine, both of Duke University School of Medicine, and Dr. David Cayer, clinical professor of medicine, Bowman Gray School of Medicine.

News Notes from the Bowman Gray School of Medicine

Dr. Chauncey G. Bly has been appointed research professor of pathology at Bowman Gray School of Medicine of Wake Forest College. His appointment was effective September 1. College officials said Dr. Bly will conduct various teaching and research programs within the department. He received his Ph. D. and M.D. degrees from the University of Rochester and the University of Rochester School of Medicine, Rochester, New York, and was previously associated with the Department of Pathology at Duke University Medical Center.

Dr. Warren N. Dannenburg has also joined the faculty as research assistant professor of biochemistry. He received his M.S. and Ph. D. degrees at Texas A. and M. College. His research activities will be in collaboration with the department of obstetrics and gynecology.

Other faculty appointments include Dr. Robert J. Faulconer as lecturer in the history of medicine; Dr. Ivan L. Holleman as instructor in pathology; Dr. Hugh L. Moffet as instructor in pediatrics (Dr. Moffett is also a National Institutes of Health fellow in virology and infectious diseases); Dr. Charles L. Moore as instructor in surgery; Drs. Frank E. Pollock and James E. Robinson as assistants in clinical orthopedics; Dr. Nancy O'Neil Whitley as assistant in preventive medicine; Dr. Thomas B. Templeton as assistant in internal medicine; Dr. Robert P. Thomas as instructor in opthalmology; and Dr. Howard S. Wainer as assistant in clinical internal medicine.

* * *

An informative medico-legal program was presented Friday, November 4, at the Bowman Gray School of Medicine's clinical amphitheater as a part of the school's annual Alumni Day activities.

James Sizemore, professor of law at the Wake Forest College School of Law and lecturer in medical jurisprudence at Bowman Gray School of Medicine, spoke on "The Doctor as an Expert Witness." Okla W. Johnson of Greensboro, agent in charge of the U. S. Treasury Department's North Carolina and western Virginia narcotics division, presented a film entitled "Medical Hazards" and spoke on "Narcotics Addiction." And, William J. McAuliffe, Jr. of Chicago, Illinois, an attorney with the legal division of the American Medical Association, discussed "Malpractice Protection."

Robert F. Clodfelter, a trust officer at Wachovia Bank and Trust Co., Winston-Salem, spoke on estate planning at the banquet session at the Forsyth Country Club. Medical school Dean C. C. Carpenter and Dr. D. E. Ward, Jr. of Lumberton, president of the Medical Alumni Association, also participated in the banquet program.

* * *

Dr. Howard H. Bradshaw, professor and chairman of the department of surgery, has been named to the National Institutes of Health's Clinical Research Fellowships Review Panel for a four-year term.

The NIH fellowship program provides individual support for training in the basic and clinical sciences in medical and allied fields. Its purpose is to develop more teachers and investigators for medical schools.

* * *

Dr. Norman M. Sulkin, William Neal Reynolds Professor of Anatomy and chairman of the department, has been named to a sub-committee of the North Carolina Governor's Coordinating Committee on Aging. The subcommittee will inventory current research in gerontology in North Carolina.

This project was recommended by a recent Specialized Study Committee on Research and Population which prepared material for the North Carolina Governor's Conference on Aging last July.

* * *

Dr. Richard C. Proctor, chairman of the department of psychiatry, was re-elected secretary-treasurer of the Southern Psychiatric Association, October 4, at Virginia Beach, Virginia. Psychiatrists in 13 southern states compose the association.

* * *

Mr. Clyde T. Hardy, Jr., director of the department of clinics, addressed a meeting of the Association of American Medical Colleges, October 31, at Hollywood Beach, Florida. His topic was "Clinical Faculties and Medical Service Plans."

* * *

Coming Academic Events

December 12, 7:30 p.m., clinical amphitheater: Committee on Medical Education program with Dr. Stephen Abrahamson, professor of education at the University of Buffalo School of Education, Buffalo, New York, speaking on "Evaluation of Teaching Programs."

Watts Hospital Symposium

The eighteenth annual Watts Hospital Symposium will be held in Durham, February 3 and 4. The following speakers will participate: Drs. Frederick W. Goodrich, Jr., John R. Haserick, William D. Holden, Oscar B. Hunter, Jr., William K. Keller, Rachmiel Levine, R. Bruce Logue, Alton Ochsner, Edward H. Rynearson, Paul A. Younge, and Col. John P. Stapp, USAF, MC.

A complimentary barbecue dinner will be served early for those desiring to attend the Carolina-Duke basketball game Saturday night. A limited number of reserved seats at $2.50 are available. Those desiring tickets should inform Dr. G. W. Crane, 1200 Broad Street, Durham by November 1.

North Carolina Hospitals Board of Control

In accord with the need for postgraduate training for physicians in psychiatry, the North Carolina State Hospitals are attempting to measure the interest of non-psychiatrists in participating in training and research in psychiatry which is going on in these various hospitals. Accredited programs are to be established according to demand and degree of support, federal and state. Interested physicians may contact Dr. Charles Vernon, Director of Professional Training, North Carolina Hospitals Board of Control, Box 70, Raleigh, North Carolina.

Central Carolina Rehabilitation Hospital

What one community is doing in rehabilitation of patients suffering from chronic disease or impairments was outlined by Dr. Robert A. Gregg, Greensboro, North Carolina, in an address at the Fifty-fourth Annual Meeting of the Southern Medical Association in St. Louis, October 31-November 3.

Speaking before the Section on Physical Medicine and Rehabilitation, Dr. Gregg discussed problems facing Guilford County, North Carolina, in providing adequate care for the long-term patient, and the progress that has been made during the past two years.

He detailed how a group of interested citizens formed a rehabilitation committee, assisted in the conversion of a former poliomyelitis hospital into a rehabilitation center at Greensboro, and saw their efforts culminate in the opening of the Central Carolina Rehabilitation Hospital, offering a medical department with a wide variety of equipment and personnel to assist the chronically disabled patient to return to his fullest functional capacity. Services at the hospital include medical, psychologic social, and vocational.

Financial assistance has been obtained from the Office of Vocational Rehabilitation under Public Law 565 to assist in operating costs for the first fiscal year.

Dr. Gregg says that a close liaison has been maintained between the Guilford County Medical Society and the rehabilitation hospital. The staff at present consists of a full-time medical director and an active courtesy staff of physicians from all specialties. The hospital is a non-profit one, governed by a nine-member Board of Trustees and medically supervised by a five-member Board of Physicians.

Robeson County Medical Society

The Robeson County Medical Society held its regular monthly meeting on October 3, at Lumberton.

Dr. Nathan Womack, professor of surgery, University of North Carolina Medical School, was speaker for an afternoon clinical session and an evening lecture. In the clinical session he discussed cholelithiasis and cancer of the breast. In the evening he presented a paper entitled "Massive Hemorrhage In Cirrhosis."

The program was sponsored by Lippincott's Medical Science.

Edgecombe-Nash Medical Society

The monthly meeting of the Edgecombe-Nash Medical Society was held October 12, in Rocky Mount.

Dr. B. M. Gold, program chairman for October, presented as guest speaker, Dr. John Arnold of the Pediatrics Department, Memorial Hospital, Chapel Hill, whose topic was "Differential Diagnosis of Polio and Viral Diseases of Childhood."

News Notes

Drs. Wilmer C. Betts, J. Douglas McRee, and Barbara M. Moore of Raleigh announce the association of Robert N. Harper for the practice of child and adult psychiatry. Offices are located at 2109 Clark Avenue, Cameron Village.

* * *

Dr. Robert T. Savage has reopened his office for general practice and pediatrics at 1020 Stratford Road, Winston-Salem.

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Dr. Sherwood W. Barefoot has announced the association of Dr. John H. Cox in the practice of dermatology, with offices located at 108 East Northwood Street in Greensboro. Dr. Cox was certified by the American Board of Dermatology and Syphilogy in 1953.

Gill Memorial Eye, Ear and Throat Hospital

The Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Virginia, will hold its thirty-fourth annual Spring Congress in Ophthalmology and Otolaryngology and Allied Specialties April 10 through April 15, 1961.

There will be 20 guest speakers and 50 lectures.

American College of Surgeons

Approximately 1,175 surgeons were inducted as new Fellows of the American College of Surgeons at the annual five-day Clinical Congress of the College.

Fellowship is awarded to doctors who fulfill comprehensive requirements for acceptable medical education and advanced training as specialists in one or another of the branches of surgery, and who give evidence of good moral character and ethical practice.

Those receiving this distinction from the State of North Carolina at the Convocation are as follows: Drs. Jack Powell, Asheville; John E. Way, Beaufort; Donald W. Robinson, Captain, USN, Camp Lejeune; Benjamin H. Flowe and Edwin M. Tomlin, Concord; Victor A. Politano and W. Glenn Young, Jr., Durham; Crowell T. Daniel, Jr., Fayetteville; M. Harvey Rubin, Greensboro; W. Grimes Byerly, Jr., Hickory; Frederick P. Dale, Kinston; John C. Lawrence, Lumberton; Duwayne D. Gadd, Pinehurst; Warren J. Collins, Shelby; J. Ralph Dunn, Jr., Tarboro; and Jesse H. Meredith, Winston-Salem.

American Medical Association

A symposium on Clinical Nutrition will be held in Washington, D. C. on November 30. This symposium, sponsored by the Council on Foods and Nutrition of the American Medical Association in cooperation with the Medical Society of the District of Columbia, will begin at 8:30 a.m. Wednesday, November 30, in Room B of the National Guard Armory. The meeting will be opened to all interested persons.

The National Foundation

The National Foundation announced recently the publication of a new monthly annotated bibliography on arthritis and related diseases. It is being sent initially to 3,650 selected individuals and institutions all over the world.

The bibliography will cover scientific articles on arthritis appearing in professional journals both here and abroad. Entitled "Current Literature—Arthritis and Related Diseases," it is designed to serve as a comprehensive and up-to-date reference to the vast international literature on rheumatic diseases.

The present plan calls for the distribution to departments of internal medicine, pediatrics, and microbiology of all medical schools in this country, to medical libraries here and abroad, to occupational and physical therapy schools, collegiate nursing schools, grantees and medical advisers of The National Foundation, a selected group in national, state and local government health agencies, members of the American Rheumatism Association, and certain medical journals and individuals.

American Board of Obstetrics and Gynecology

The Part 1 examinations (written) will be held in various cities of the United States, Canada, and military centers outside the Continental United States on Friday, January 13, 1961.

Reopened candidates will be required to submit case reports for review 30 days after notification of eligibility. No reopened candidate may take the written examination unless the case abstracts have been received in the office of the executive secretary.

Current Bulletins outlining present requirements may be obtained by writing to Executive Secretary, Robert L. Faulkner, M.D., American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

World Medical Association

At its fourteenth General Assembly held in West Berlin, Germany, September 15-22, the World Medical Association elected the following officers: president—Dr. Paul Eckel, Germany; president-elect—Dr. Antonio Moniz, Brazil; Council members—Drs. J. G. Hunter, Australia; L. W. Larson, U. S. A.; Antonio Spinelli, Italy; Hector Rodriguez, Chili.

Dr. Heinz Lord was elected secretary-general, and Dr. Gunnar Gundersen was elected chairman of the Council. Dr. Larson is chairman of the Committee on Medical Education.

U. S. Department of Health, Education and Welfare

Competitive Examinations for appointment of physicians as Medical Officers in the Regular Corps of the United States Public Health Service Commissioned Corps will be held throughout the United States on January 31, and February 1 and 2, 1961.

Application forms may be obtained by writing to the Surgeon General, United States Public Health Service (P), Washington 25, D. C. Completed application forms must be received no later than December 2, 1960.

* * *

The cooperation of physicians is requested in a study on the association of polycythemia with neoplastic disease being conducted by the metabolism service of the National Cancer Institute in the Clinical Center of the National Institutes of Health. An elevation of the circulating red cell volume in the absence of leucocytosis and thrombocytosis has been noted in a significant number of patients with renal tumors and cerebellar hemangioblastomas and rarely in patients with uterine fibroids, pheochromocytomas, and other neoplasms. The presence of an erythropoiesis stimulating factor has been demonstrated in homogenates of the cerebellar, renal, and pheochromocytoma tumor tissue. This study has as its purpose the determination of the chemi-

cal and mode of action of the erythropoiesis stimulating factor produced by these tumors.

Patients admitted to the study undergo a period of clinical evaluation including the determination of the circulating red cell volume, red cell life span and the rate of red cell synthesis. Plasma and tumor tissue, if available, will be assayed for erythropoiesis stimulating activity.

Physicians who wish to have their patients considered for this study at the National Cancer Institute may write or call: Dr. Thomas A. Waldmann, National Cancer Institute, Bethesda 14, Maryland.

* * *

Physicians and workers in allied fields who are interested in the venereal diseases are invited to participate in the twelfth annual Venereal Disease Symposium at the Hotel New Yorker in New York City April 13 and 14, 1961.

The program committee for the 1961 symposium points out that reported cases of primary and secondary syphilis have increased 52 per cent over the past year.

Sponsored jointly by the American Venereal Disease Association and the Public Health Service, the symposium will follow a Seminar on Venereal Disease for public health personnel which begins April 10.

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Veterans Administration

An electronic flash system that provides light for photographing the interior of the human eyeball—and quickly enough to give a minimum of discomfort to the patient—has been developed by a Veterans Administration medical illustrator.

He is Leonard M. Hart of the Durham, North Carolina, VA hospital's medical illustration division.

Hart's lighting system can be used on a standard retinal camera.

He has been developing the electronic flash for about five years. He devised the lighting system while he was employed at the VA's West Side Hospital in Chicago and perfected it at the Durham VA hospital, where he is working in conjunction with Dr. Albert Heyman of Duke Hospital.

The electronic flash is used for only one-thouandth of a second, and focusing is done by use of a milder repetitive flashing light.

Dr. Heyman uses the photographs to study blood vessels inside the eyeball, as an aid to diagnosis of abnormalities in blood vessels of the brain and for research about strokes.

Hart described his new electronic flash system at a recent meeting of the Biological Photographic Association, in Salt Lake City.

* * *

Appointment of Dr. Robert I. McClaughry of the National Academy of Sciences-National Research Council as director of medical education service for the Veterans Administration was announced by the VA today.

A former assistant dean of Wayne University's College of Medicine in Detroit, Dr. McClaughry has been associated in a professional capacity with the Division of Medical Sciences of the National Academy of Sciences in Washington, D. C., since June 1958.

* * *

Appointment of Joe Meyer, Ph.D., as chief of the medical research laboratories division of the Veterans Administration was announced by the VA recently.

Dr. Meyer has been serving as chief of the medical research laboratories of the Houston, Texas, VA hospital and associate professor of biochemistry at Baylor University College of Medicine, since 1959.

New Medical Film Released

The release of a new medical film, "The Mechanism and Control of Nausea and Vomiting," was announced recently by Smith Kline & French Laboratories.

Jack C. Borland, director of SK&F's Medical Film Center, said the 21-minute, color film is "based on the findings over the past 10 years on the neurological mechanisms involved in nausea and vomiting." It is available on a free-loan basis to pro-

fessional audiences through local representatives of the Philadelphia pharmaceutical firm.

Prints of the new film also may be obtained through the Medical Film Center, Smith Kline & French Laboratories, Philadelphia 1, Pa.

* * *

Griseofulvin Effective in Treatment of Bursitis

Effective treatment of bursitis, pain from "whiplash" injuries to the neck, and the shoulder-hand syndrome by the administration of griseofulvin was reported by Dr. Howard Rusk in the August 14 issue of the New York Times.

In an earlier report, published in the June 4 issue of the **Journal of the American Medical Association**, Drs. Abraham Cohen, Richard Daniels, and William Kanenson, all of Philadelphia, and Dr. Joel Goldman of Johnstown, Pennsylvania, told of their successful use of griseofulvin in the treatment of shoulder-hand syndrome.

Operating on the theory that the antibiotic could be used as an anti-inflammatory agent, the physicians administered Fulvicin (griseofulvin) to patients suffering from rheumatoid arthritis, including 12 patients with shoulder-hand syndrome, a disease affecting the nerves and circulation. No effect was noted in relieving the pain or other symptoms of the arthritis. However, good results were observed in those patients with shoulder-hand syndrome.

Dr. Rusk noted that "this is far too small a group from which to draw firm and permanent conclusions, but the improvement was so prompt and lasting that it seemed significant."

Dr. Cohen and his associates stated that "we are unable to give a scientific explanation of our findings. The consistency with which the improvement occurs is indeed unusual. This is a preliminary report, made in the hope that others might use this method either to confirm or refute our findings."

Griseofulvin was introduced in this country as Fulvicin by Schering Corporation in the fall of 1959.

"Prescription for Tomorrow"

One of the most fruitful efforts to bring the achievements and the American health team—the doctor, the druggist and the pharmaceutical manufacturer—to public attention reached a milestone recently with the one thousandth presentation of the speech "Prescription for Tomorrow."

The talk, which details the "medical revolution" which has taken place during the last 30 years, is the focal point of an ambitious speakers program initiated by Smith Kline & French Laboratories, Philadelphia drug firm, in June, 1959. Since that time the speech has been heard by approximately 50,000 members of civic, fraternal and social groups throughout 48 states and Canada.

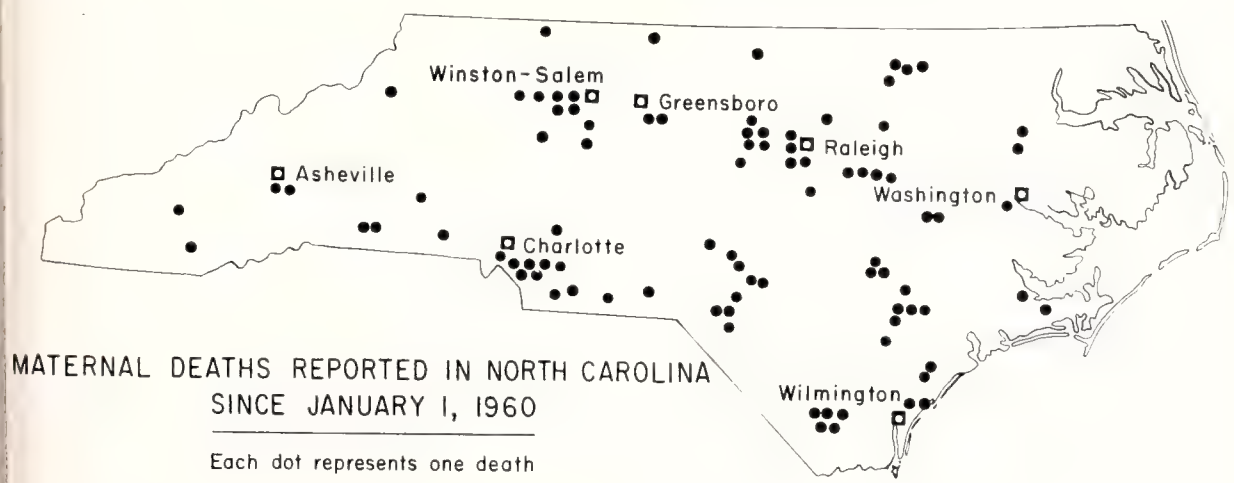
In addition, it has carried to radio and television audiences of more than 700,000.

The one thousandth presentation was made before the Johnstown, Pennsylvania, Rotary Club by SK&F Professional Service Representative James Blough, one of more than 250 speakers trained under the program.

Because of the success of this "grass roots" program, the SK&F Speaker Bureau is currently enlarging its scope to include talks on mental health and the importance of quality control in pharmaceutical manufacturing. Groups interested in securing speakers for their gatherings may contact Dr. Robert Haakenson, S.K. and F. Manager of Community Education for further information.

Classified Advertisement

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The Month in Washington

Representatives of the medical and health professions the federal government and national civic groups are cooperating in development of a program for starting the general use of the Sabin live-virus poliomyelitis vaccine next year.

Shortly after clearing the Sabin vaccine for general use, Leroy E. Burney, M.D., Surgeon General of the Public Health Service, asked 23 non-government organizations to designate members to serve on a Surgeon General's Committee on Poliomyelitis Control.

An Agenda Committee met with PHS officials in Atlanta October 11 and 12 and drafted a basic agenda for a meeting of the Control committee in mid-winter. At the Atlanta meeting, preliminary consideration was given to administrative and technical problems involved in use of the live-virus vaccine developed by Albert B. Sabin, M.D., of Cincinnati.

The Agenda committee was made up of representatives of the American Medical Association, American Academy of General Practice, American Academy of Pediatrics, Association of State and Territorial Health Officers, Children's Bureau, and the National Foundation.

The Sabin vaccine is not expected to be available in substantial quantities before mid-1961.

The chief question is whether the vaccine —which is given orally in the form of pills, liquid or candy—will be administered on individual or mass community basis. The PHS special committee that recommended approval of the oral vaccine said that the community basis would be better.

"Because of the unique nature of live poliovirus vaccine, with its capacity to spread the virus in a limited manner to non-vaccinated persons, the committee cannot make recommendations for manufacture without expressing concern about the manner in which it may be used," the special committee said.

"The seriousness of this responsibility can be illustrated, for example, by the known potentiality of reversion to virulence of live poliovirus vaccine strains, and the possible importance of this feature in the community if the vaccine is improperly used.

"For example, the vaccine has been employed largely in mass administrations where most of the susceptibles were simultaneously given the vaccine, thus permitting little opportunity for serial human transmission; or, it has been administered during a season of the year when wild strains have usually shown limited capacity for spread. This experience should provide the basis for developing useable practices for the U.S.A."

The special committee also said attention should be given to administration to special groups, such as very young children, pregnant women, and susceptible adults.

"Even more important is the planned continuation of this program as long as necessary to achieve and maintain the required results," the committee said.

The committee was headed by Roderick Murray, M.D., of the National Institutes of Health. Its other members were four M.D.'s and one Ph.D., all of whom were connected with universities except for one M.D. from the PHS's Communicable Disease Center at Atlanta.

Neither the committee nor Dr. Burney anticipated that the live virus vaccine would replace the killed-virus Salk vaccine used since April, 1955.

"It appears probable that only a unified national program which utilizes each of the available types of vaccine to its best advantage can accomplish the total prevention of outbreaks," the committee said.

Dr. Julian P. Price of Florence, S. C., chairman of the A.M.A.'s Board of Trustees, predicted the live-virus vaccine "will be one more powerful weapon against an ancient and crippling disease." He said that physicians "have conscientiously pushed immunization with the Salk vaccine and now, with this new vaccine, the profession is hopeful that even better results can be achieved."

* * *

Five states were ready soon after the effective date of October 1 to submit plans for participation in the federal-state program of health care for the needy and near-needy aged persons which recently was enacted into law. The states were Arkansas,

From Washington Office, American Medical Association, 1523 L Street, N.W.

Michigan, New Mexico, Oklahoma, and Washington.

As of early October, another 25 states were preparing to consider legislation to set up such a program or had indicated a willingness to proceed without new legislation. They were Alabama, California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kentucky, Louisiana, Massachusetts, Montana, Nevada, New Jersey, North Dakota, North Carolina, Ohio, Pennsylvania, Rhode Island, Utah, West Virginia, Virginia, and Wyoming.

Arthur S. Fleming, Secretary of Health, Education and Welfare, urged all states to take part in the program as soon as possible. But he also said he hopes that Congress in the next session will approve a Republican plan for a supplementary federal-state program to help provide private health insurance for elderly persons who cannot meet their medical expenses.

It appears that the issue probably will arise in Congress next year because some Democrats also have said they will again sponsor legislation that would provide health care for aged persons through the Social Security system.

* * *

The A.M.A. has launched a "comprehensive study and action program" to guide Americans in spending their health-care dollars more wisely.

The A.M.A.'s new Commission on Medical Care Costs has set out "to find answers to the many questions being raised about medical care costs and to present the findings frankly and forthrightly to the medical profession and to the public."

The program is "dedicated to promoting the highest quality health care at the lowest cost." Louis M. Orr, M.D., of Orlando, Florida, chairman of the commission, said that "any barrier that stands in the way of this objective should be removed—immediately."

One of these barriers is money wasted on ineffective non-prescription or over-the-counter drug products, such as vitamins, food fads, and rheumatism and arthritis remedies. A.M.A.'s Council on Foods and Nutrition has estimated that much of the estimated $350 million spent annually on self-prescribed vitamins is wasted.

The A.M.A. is urging physicians to alert their patients and the public to the latent dangers involved in self-prescribing and to the folly of throwing their health-care dollars away on quackeries.

On another front in the war against quackery, Food and Drug Commissioner George P. Larrick reported that during the past 12 months the FDA had seized falsely promoted vitamins, minerals and other so-called "health foods" valued in excess of $1.5 million. He said that the amount of misinformation, pseudo-science and plain "hokum" on health care reaching the public through books and magazine articles is increasing.

In Memoriam

Joseph Francis McGowan, M.D.

Dr. Joseph Francis McGowan, aged 57, died at 11:40 a.m., Sunday, July 17, in an Asheville hospital after a brief illness.

Dr. McGowan was the son of the late John and Ann Burns McGowan of Cresson, Pennsylvania, where he attended the public schools and St. Francis College. His family then moved to Youngstown, Ohio, where he attended the Youngstown College and received his B.S. degree. He took his medical course at the University of Maryland, graduating in 1929.

After graduating in medicine Dr. McGowan returned to Ohio and served an Internship at St. Elizabeth Hospital Hospital in Youngstown, Ohio, and engaged in general practice there for four years. He then became interested in Eye, Ear, Nose and Throat, and began the special studies in these fields.

He took extensive post graduate courses in many teaching centers including the University of Chicago, Rush Medical College, University of Indiana and North Western University. He served a term as resident physician and surgeon at the Episcopal E.E.N.T. Hospital in Washington, D. C., and then further studied at Columbia University and N. Y. Post Graduate Medical School.

Dr. McGowan came to Asheville in 1937 and began the practice of his specialty. He soon became a member of the staffs of the Aston Park, Memorial Mission, and St. Joseph's Hospitals. In the latter hospital he served a term as chief of staff. During the large practice of his specialty he was the author of many articles which were published in medical and scientific journals.

He was a past president of the Asheville Lions Club, a member of St. Lawrence Catholic Church, and the Fourth Degree Knights of Columbus, and the Phi Chi Medical fraternity.

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Dr. McGowan's interest in the activities and scientific progress in medicine is shown by the number of organizations to which he belonged. Among these are: The North Carolina State Medical Society, the North Carolina E.E.N.T. Society, the Southern Medical Association, and the American Medical Association. He was a Diplomate of the American College of Allergists, and of the American Otorhinological Society for the advancement of reconstructive plastic surgery. He was a Diplomate of the American Board of Otolaryngology, a member of the American College of Ophthamology and Otolaryngology, and the New York Academy of Science.

Surviving are the widow (the former Miss Frances Genevieve Oddi), one son and four daughters of the home in Asheville, one brother Charles McGowan of Pittsburg, Pennsylvania, and two sisters, Mrs. Joseph Singer of Coraoplis, Pennsylvania, and Mrs. Ben Conlin of Washington, D. C.

During the period of almost a quarter of a century of practice in Asheville, Dr. McGowan proved himself to be devoted to his family and actively interested in the work of the church, the hospitals, the medical societies, and the community at large. One of his greatest hobbies was music.

His passing at the early age of 57 is a great loss to the family, his friends, his patients and to the community. He will continue to live in their memories.

Be it therefore resolved that the report of this committee be adopted and entered into the minutes of this Society; and that a copy be sent to the family, to the North Carolina State Medical Society, and to the A.M.A.

R. A. White, M.D.
W. M. Russell, M.D.
H. H. Briggs, M.D.

Adam Tredwell Thorp, M.D.

Dr. Adam Tredwell Thorp died at Park View Hospital in Rocky Mount, on July 5, 1960, at the age of 66. His death will be deeply felt by his patients, friends, and professional colleagues throughout the state.

He is survived by his wife, Mrs. Helen Merriam Thorp of Rocky Mount; two sons, Dr. Adam T. Thorp, Jr. of Bethesda, Maryland, and Dr. James M. Thorp of Portsmouth, Virginia; and four grandchildren. He is also survived by two brothers, Mr. Isaac D. Thorp of Rocky Mount and Mr. John Thorp of Wythville, Virginia.

Dr. Thorp was born in Nash County near Rocky Mount in 1893. Following his early education in the community schools he attended the University of North Carolina, where he received his A.B. degree in 1916. After teaching for a year in Goldsboro, he returned to the University of North Carolina where he entered medical school. After completing the two-year medical course there, he transferred to the University of Pennsylvania where he received his M.D. degree in 1921.

After an internship at the Episcopal Hospital in Philadelphia, Dr. Thorp returned to Rocky Mount and began the practice of general medicine. He became interested in obstetrics and gynecology and in 1940, after doing post-graduate work, he restricted his practice to that specialty. In addition to his membership in the local, district, and state medical societies, Dr. Thorp was a member of the North Carolina Obstetrical and Gynecological Society, which organization he served as president in 1955, and of the South Atlantic Association of Obstetricians and Gynecologists. He was a Fellow in the American College of Obstetrics and Gynecology.

Dr. Thorp had many non-professional interests. He was a life-long member of the Episcopal Church. For many years he served as Director of the local chapter of the Salvation Army and of the YMCA. He maintained an active interest in the University of North Carolina and particularly to The Medical School and served as President of the Medical Alumni and permanent class agent for his class of 1919.

Adam Thorp was a beloved man. He will be best remembered for his endless expressions of thoughtfulness and kindness and for his gentle good humor. His acts of kindness have made for many a road less bumpy or a day more bright.

He loved the practice of medicine. He was one of those few—those fortunate few—who early made the complete self-surrender and thereafter wore the iron yoke of duty—not complainingly—but joyously.

He loved people, he loved his fellowman. And like Abou Ben Adhem, we feel that he will be at the head of the list of those whom the Lord loves.

He died after a massive myocardial infarction. His manner of dying confirmed the axiom of the late Sir William Osler: As a man lives so does he die. Dr. Thorp died quietly, peacefully, a gentleman unafraid.

Therefore be it resolved, that we do mourn the loss of our fellow-member of the Edgecombe-Nash Medical Society, and that we extend our sympathy and understanding to his widow, Helen Thorp, and, that a copy of these resolutions be spread upon the minutes of this Society and a copy be sent to Mrs. Thorp and the North Carolina State Medical Society.

C. T. Smith, M.D.
A. L. Daughtridge, M.D.
J. C. Brantley, Jr., M.D.

Earl W. Brian, M.D.

WHEREAS, the death of Earl W. Brian, Raleigh physician and a member of the State Board of Health from July 15, to August 1, 1960, has brought profound sorrow to his multitude of friends and associates, and

WHEREAS, the State Board in recognition of his influence and invaluable service wishing to express

its sense of personal loss in his passing and its grateful appreciation of his many virtues, does hereby set forth this formal resolution of respect.

A native of Arkansas, Earl W. Brian received his medical degree at Duke University in 1934 and practiced medicine in Raleigh beginning in 1939. In Raleigh he plunged into the professional and civic life of the city and became active as a member of the Edenton Street Methodist Church.

Elected to membership on the State Board of Health in 1958 by action of the Medical Society of the State of North Carolina, he brought to the State Board a wealth of training and experience in medical care, years of unselfish community services —civic, church and preventive medicine, and above all a devoted motivation and gentleness of spirit in his every word and action. In his work on the State Board he showed the same wisdom and conscientious devotion to duty that he demonstrated in his private life. His influence will be projected through each of his co-workers in the State Board of Health for a long time to come.

His deep interest in his fellow man and his acute sense of duty were combined with his innate ability in a way that brought him into places of principal leadership in many phases of the community's life —in the Wake County Medical Society, the Raleigh Kiwanis Club, the Executives Club of Raleigh, the United Fund of Raleigh, the Salvation Army, the Occoneechee Boy Scout Council, the Wake County Cancer Society, the Heart Association, the Wake County Tuberculosis Association and in other organizations touching helpfully the health and welfare of those about him.

Ever the epitome of a gentleman, an ardent champion of the manly art of chivalric demeanor, he moved among us with a quiet voice, a gentle countenance, and a noble bearing that reflected and bespoke the majestic character from which they emanated. To know him was not only to love him but also to join hands with him in living for others. Be it therefore

Resolved, that this expression of respect and appreciation be formally enacted by the State Board of Health and spread upon its official minutes, and that a copy be forwarded to the family of our departed friend to convey, though inadequately, the heartfelt sympathy of the members of the State Board, and be it further

Resolved, that copies be also sent to the editor of the NORTH CAROLINA MEDICAL JOURNAL, the editor of the Journal of the American Medical Association, the editor of the Journal of the American Public Health Association, the Secretary of the Medical Society of the State of North Carolina, and to the Secretary of the North Carolina Public Health Association.

This sixth day of October, 1960.

BOOKS RECEIVED

Adventure to Motherhood: The Picture-Story of Pregnancy and Childbirth. By J. Allan Offen, M.D. Price, $2.95. Published by Audio Visual Education Company of America, Inc. Distributed by Taplinger Publishing Co., Inc., New York. 1960.

Your Child's Care. By Harry R. Litchfield, M.D., and Leon H. Dembro, M.D. 1001 Questions and Answers. 257 pages. Price, $3.95. New York: Doubleday & Company, 1960.

French's Index of Differential Diagnosis. Edited by Arthur H. Outhwaite, M.D. Ed. 8. 1111 pages. Price, $24.00. Baltimore: The Williams & Wilkins Company, 1960.

Symposium of Pathology. By W. A. D. Anderson. Ed. 5. 876 pages. Price, $9.25. St. Louis: The C. V. Mosby Company, 1960.

Sight: A Handbook for Laymen. The Structure, Functions, Malfuntions and Diseases of the Eye. By Roy O. Scholtz, M.D. 166 pages. Price, $3.50. Garden City, New York: Doubleday & Company, Inc., 1960.

Nine Months' Reading: A Medical Guide for Pregnant Women. By Robert E. Hall, M.D. 191 pages. Price, $2.95. Garden City, New York: Doubleday & Company, Inc., 1960.

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SK&F Names New Director of Research

Dr. John Kapp Clark has been named director of Research & Development at Smith Kline & French Laboratories in Philadelphia.

Dr. Clark, who had been SK&F's director of Research, succeeds W. Furness Thompson who has resigned as vice president of Research & Development. In addition to his new position with the pharmaceutical firm, Dr. Clark will continue his affiiliation with the University of Pennsylvania where he serves as associate professor of medicine.

Last year, according to National Safety Council statistics, some 9,300,000 citizens suffered fatal or disabling injuries with approximately half of these occurring in the supposed safe confines of the home. In recent years, accidents have killed, maimed and crippled more children between the ages of 1 and 14 than the seven deadliest diseases combined, and are now the leading cause of death for all persons between the ages of 1 and 36.

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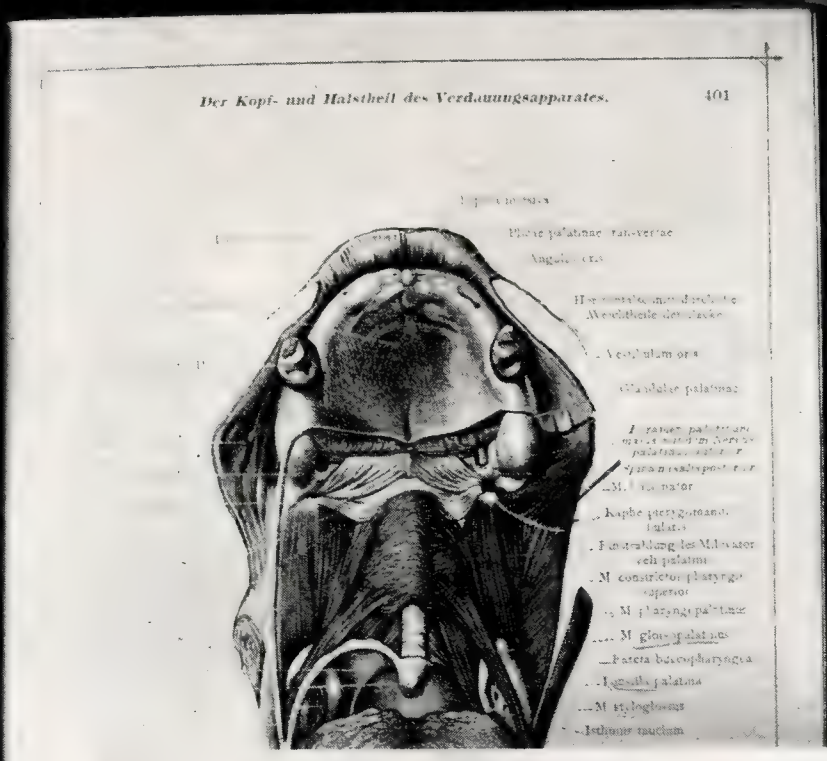
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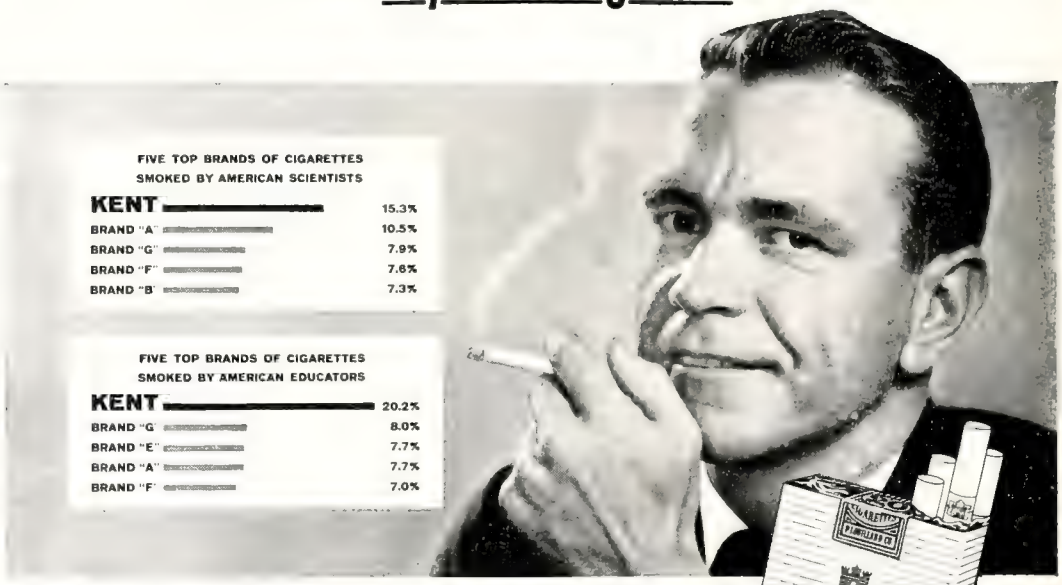
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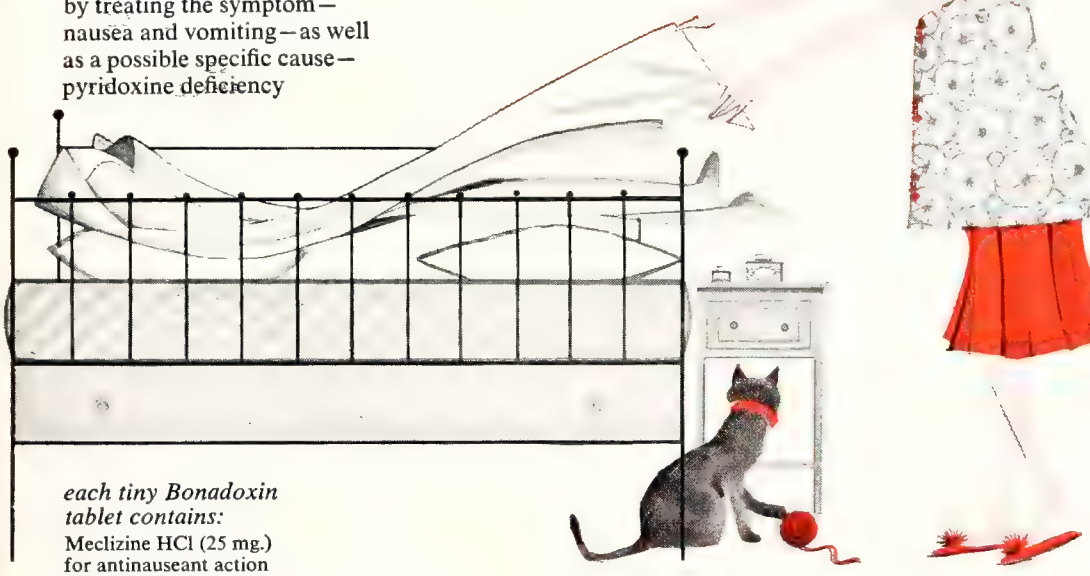
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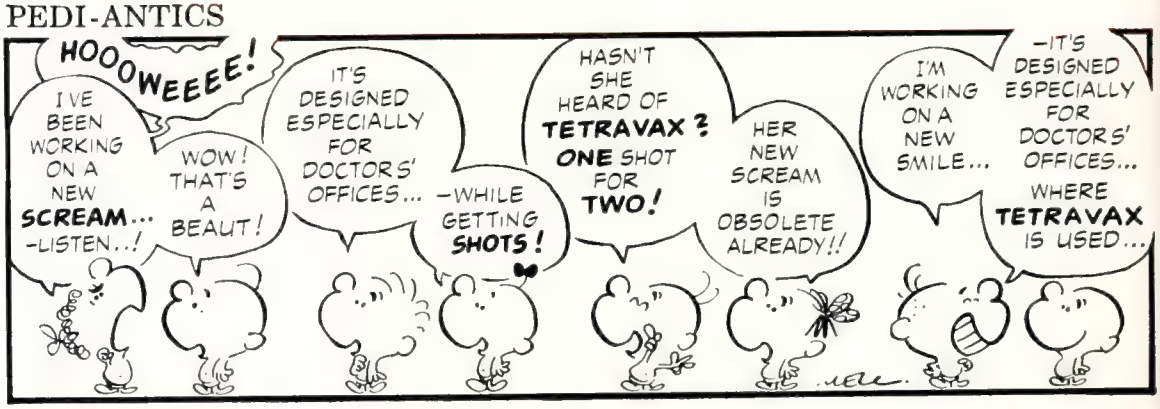
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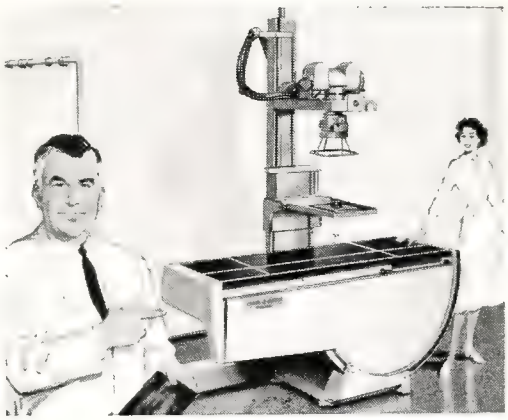
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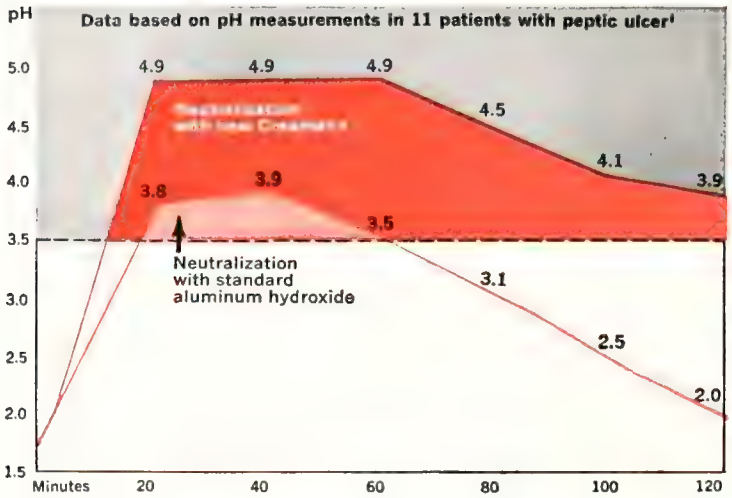
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1. Data in the files of the Department of Medical Research, Winthrop Laboratories. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: **J. Am. Pharm. A.** (Scient. Ed.) 48:384, July, 1959.

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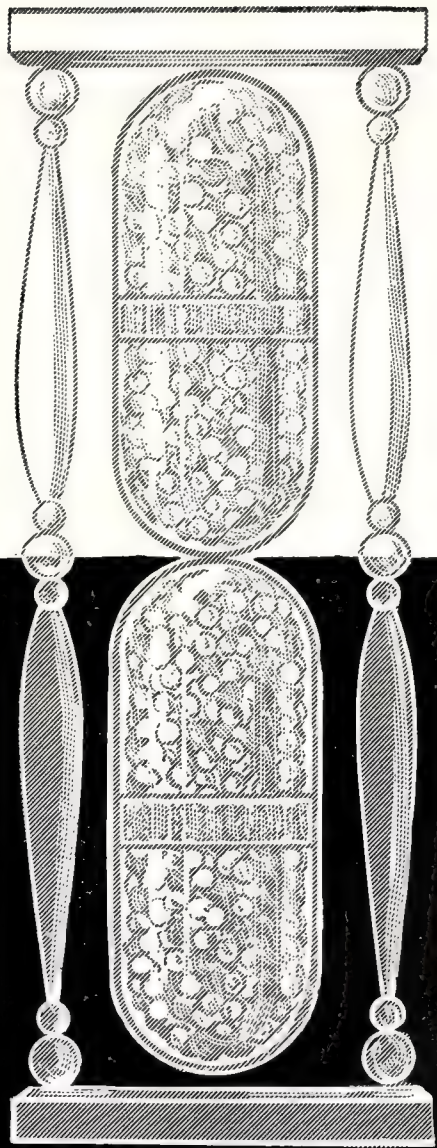
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PREDLON™
PELSULES*
prednisolone

Only 2 Pelsules Daily
Maintenance Dose

- Better therapeutic response
- Reduced daily dosage
- Fewer side effects
- Greater safety, convenience and economy



Now, for the first time, the benefits of steroid therapy are enhanced by sustained release PREDLON PELSULES.

USES: Rheumatoid arthritis, disseminated lupus erythematosus, allergic diseases, and other conditions where the use of steroids is indicated.

SUPPLY: PREDLON 5 mg. is available in bottles of 30 and 100 Pelsules.

DRUG Specialties INC.

Samples and Literature on request

WINSTON-SALEM 1, NORTH CAROLINA

*trademark for timed disintegration capsules

contain the bacteria-prone cold

Tain

(Triacetyloleandomycin, Triaminic® and Calurin®)



inner protection with...

safe antibiosis

Triacetyloleandomycin, equivalent to oleandomycin 125 mg. This is the URI antibiotic, clinically effective against certain antibiotic-resistant organisms.

fast decongestion

Triaminic®, 25 mg., three active components stop running noses. Relief starts in minutes, lasts for hours.

well-tolerated analgesia

Calurin®, calcium acetylsalicylate carbamide equivalent to aspirin 300 mg. This is the freely-soluble calcium aspirin that minimizes local irritation, chemical erosion, gastric damage. High, fast blood levels.

TAIN brings quick, symptomatic relief of the common cold (malaise, headache, muscular cramps, aches and pains) especially when susceptible organisms are likely to cause secondary infection. Usual adult dose is 2 Inlay-Tabs, q.i.d. In bottles of 50. ℞ only. Remember, to contain the bacteria-prone cold...TAIN.

SMITH-DORSEY • Lincoln, Nebraska
a division of The Wander Company



Dependable
Pain Reliever

Professional confidence in the uniformity, potency and purity of Bayer Aspirin is evidenced by ever increasing recommendation. Bayer Aspirin is the most widely accepted brand of analgesic the world has ever known.

We welcome your requests for samples of Bayer Aspirin and Flavored Bayer Aspirin for Children.



THE BAYER COMPANY, DIVISION OF STERLING DRUG INC., 1450 BROADWAY, NEW YORK 18, N.Y.

in arthritis and allied disorders

Butazolidin®
brand of phenylbutazone
Geigy

Proved by a Decade of Experience
Confirmed by 1700 Published Reports
Attested by World-Wide Usage

Since its anti-inflammatory properties were first noted in Geigy laboratories 10 years ago, time and experience have steadily fortified the position of Butazolidin as a leading nonhormonal anti-arthritic agent. Indicated in both chronic and acute forms of arthritis, Butazolidin is noted for its striking effectiveness in relieving pain, increasing mobility and halting inflammatory change.



Butazolidin®, brand of phenylbutazone: Red, sugar-coated tablets of 100 mg. Butazolidin® Alka: Orange and white capsules containing Butazolidin 100 mg.; dried aluminum hydroxide gel 100 mg.; magnesium trisilicate 150 mg.; homatropine methylbromide 1.25 mg.

Geigy, Ardsley, New York

162-60

Major Hospital Policy

Pays up to $10,000.00 for each member of your family, subject to deductible you choose

Deductible Plans available:

$100.00
$300.00
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Covers your office overhead while you are disabled, up to $1,000.00 per month

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Across Street from Cone Hospital
GREENSBORO, N. C.
Phones: BRoadway 5-3400 BRoadway 5-5035

for acute
upper respiratory infections

Tetrex® capsules

effective control of pathogens...with an unsurpassed record of safety and tolerance



SUPPLY: TETREX Capsules — tetracycline phosphate complex — each equivalent to 250 mg. tetracycline HCl activity. Bottles of 16 and 100.

TETREX Syrup — tetracycline (ammonium polyphosphate buffered) syrup — equivalent to 125 mg. tetracycline HCl activity per 5 ml teaspoonful. Bottles of 2 fl. oz. and 1 pint.

BRISTOL LABORATORIES, SYRACUSE, NEW YORK
Div. of Bristol-Myers Co.

BRISTOL ™



IN ACNE smooth the skin— cheer the patient

Use of pHisoHex for washing the skin augments any other therapy for acne — brings better results. Now, pHisoAc Cream, a new acne remedy for topical application, suppresses and masks lesions — dries, peels and degerms the skin. Together, pHisoHex and pHisoAc provide **basic** complementary topical therapy for acne.

pHisoHex, antibacterial detergent with 3 per cent hexachlorophene, removes soil and oil better than soap — provides **continuous** degerming action when used often. pHisoHex is nonalkaline, nonirritating and hypoallergenic.

When pHisoAc Cream is used with pHisoHex washings, it unplugs follicles, helps prevent development of comedones, pustules and scarring. New pHisoAc Cream is flesh-toned, not greasy. It contains colloidal sulfur 6 per cent, resorcinol 1.5 per cent, and hexachlorophene 0.3 per cent in a specially prepared base. pHisoAc is pleasant to use.

A new "self-help" booklet, **Teen-aged? Have acne? Feel lonely?,** gives important **psychologic first aid** for patients with acne and describes the proper use of pHisoHex and pHisoAc. Ask your Winthrop representative for copies.

pHisoAc is available in 1½ oz. tubes and pHisoHex is available in 5 oz. plastic squeeze bottles and in bottles of 16 oz.

pHisoHex® and pHisoAc for acne

trademark

Winthrop LABORATORIES New York 18, N. Y.

"...extraordinarily effective diuretic..."[1]

Efficacy and expanding clinical use are making Naturetin the diuretic of choice in edema and hypertension. It maintains a favorable urinary sodium-potassium excretion ratio, retains a balanced electrolyte pattern, and causes a relatively small increase in the urinary pH.[2] More potent than other diuretics, Naturetin usually provides 18-hour diuretic action with just a single 5 mg. tablet per day — economical, once-a-day dosage for the patient. Naturetin c K — for added protection in those special conditions predisposing to hypokalemia and for patients on long-term therapy.

Supplied: Naturetin Tablets, 5 mg., scored, and 2.5 mg. Naturetin c K (5 c 500) Tablets, capsule-shaped, containing 5 mg. benzydroflumethiazide and 500 mg. potassium chloride. Naturetin c K (2.5 c 500) Tablets, capsule-shaped, containing 2.5 mg. benzydroflumethiazide and 500 mg. potassium chloride. For complete information consult package circular or write Professional Service Dept., Squibb, 745 Fifth Avenue, New York 22, N. Y.

References: 1. David, N. A.; Porter, G. A., and Gray, R. H.: Monographs on Therapy 5:60 (Feb.) 1960. 2. Ford, R. V.: Current Therap. Res. 2:92 (Mar.) 1960.

Naturetin **Naturetin c K** SQUIBB

Squibb Brand of Benzydroflumethiazide with Potassium Chloride



"NATURETIN" IS A SQUIBB TRADEMARK.



the complaint: "nervous indigestion"

the diagnosis: any of several nonspecific and functional gastrointestinal disorders requiring relief of symptoms by sedative-antispasmodic action with concomitant digestive enzyme therapy.

the prescription: a new formulation incorporated in an enteric-coated tablet, providing the multiple actions of widely accepted Donnatal® and Entozyme.®

the dosage: two tablets three times a day, or as indicated.

in the gastric-soluble outer layer:

Hyoscyamine sulfate	0.0518 mg.
Atropine sulfate	0.0097 mg.
Hyoscine hydrobromide	0.0033 mg.
Phenobarbital (1/8 gr.)	8.1 mg.
Pepsin, N. F.	150 mg.

in the enteric-coated core:

Pancreatin, N. F.	300 mg.
Bile salts	150 mg.

antispasmodic • sedative • digestant

DONNAZYME®

A. H. ROBINS COMPANY, INCORPORATED • RICHMOND 20, VIRGINIA



more effective than salicylate alone in antirheumatic therapy

PABALATE®

COMBINING MUTUALLY SYNERGISTIC NON-STEROID ANTIRHEUMATICS

"superior to aspirin" — ". . . evidence seems to indicate that the concurrent administration of para-aminobenzoic and salicylic acid [as in Pabalate] produces a more uniformly sustained level for prolonged analgesia and, therefore, is superior to aspirin in the treatment of chronic rheumatic disorders."[1]

In each yellow enteric-coated PABALATE tablet:

Sodium salicylate (5 gr.)	0.3 Gm.
Sodium para-aminobenzoate (5 gr.)	0.3 Gm.
Ascorbic acid	50.0 mg.

For the patient who should avoid sodium

PABALATE®-SODIUM FREE

Same formula as Pabalate, with sodium salts replaced by potassium salts (pink)

For the patient who requires steroids

PABALATE®-HC

Pabalate with Hydrocortisone

In each light blue enteric-coated PABALATE-HC tablet:

Hydrocortisone	2.5 mg.
Potassium salicylate (5 gr.)	0.3 Gm.
Potassium para-aminobenzoate (5 gr.)	0.3 Gm.
Ascorbic acid	50.0 mg.







1. Ford, R. A., and Blanchard, K.: Journal-Lancet 78:185, 1958.

A. H. ROBINS CO., INC., Richmond 20, Virginia

in common Gram-positive infections due to susceptible organisms

YOU CAN COUNT ON

TAO®*

(triacetyloleandomycin)

even in many resistant Staph*



1,928 published cases in the two years since TAO was released for general use show:

94.3% effectiveness in respiratory infections (617 cases including tonsillitis, staphylococcal and streptococcal pharyngitis, bronchitis, infectious asthma, broncho-pneumonia, lobar pneumonia, bronchiectasis, lung abscess, otitis.) **You can count on TAO.**

92% effectiveness in skin and soft tissue infections (900 cases including pyoderma, impetigo, acne, infected skin disorders, wounds, incisions and burns, furunculosis, abscess, cellulitis, chronic ulcer, adenitis.) **You can count on TAO.**

87.1% effectiveness in genitourinary infections (349 cases including urethritis, cystitis, pyelitis, pyelonephritis, orchitis, pelvic inflammation, acute gonococcal urethritis, lymphogranuloma venereum.) **You can count on TAO.**

75.8% effectiveness in diverse infections (62 cases including fever of undetermined origin, peritoneal abscess, osteitis, periarthritis, septic arthritis, staphylococcal enterocolitis, gastroenteritis, carriers of staphylococci.) **You can count on TAO.**

95.6% of 1,928 cases free of side effects—in the remaining 4.4%, reactions were chiefly mild gastrointestinal disturbances which seldom necessitated discontinuance of therapy.

*In 884 of 1,928 cases the causative organisms were mostly staphylococci. The majority of clinical isolates were found to be resistant to at least one of the commonly used antibiotics and many patients had failed to respond to previous therapy with one or more antibiotics. **TAO proved 93.4% effective in these 884 cases.**

Complete bibliography available on request.

DOSAGE: varies according to severity of infection. Usual adult dose—250 to 500 mg. q.i.d. Usual pediatric dose: 3-5 mg./lb. body weight every 6 hours.

NOTE: In some children, when TAO was administered at considerably higher than therapeutic levels for extended periods, transient-jaundice and other indications of liver dysfunction have been noted. A rapid and complete return to normal occurred when TAO was withdrawn.

SUPPLY: TAO CAPSULES—250 mg. and 125 mg., bottles of 60. TAO ORAL SUSPENSION—125 mg. per 5 cc. when reconstituted, palatable cherry flavor, 60 cc. bottles. TAO PEDIATRIC DROPS—100 mg. per cc. when reconstituted, flavorful; special calibrated dropper, 10 cc. bottles. INTRAMUSCULAR or INTRAVENOUS—10 cc. vials, as oleandomycin phosphate.

OTHER TAO FORMULATIONS ALSO AVAILABLE: TAO®-AC (Tao, analgesic, antihistaminic compound) capsules, bottles of 36. TAOMID® (Tao with Triple Sulfas)—tablets, bottles of 60. Oral Suspension—60 cc. bottles.

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Formulated from Pfizer's line of fine pharmaceutical products.

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Science for the World's Well-Being™

How to be Carefree Without Hardly Trying . . .



It really takes a load off your mind. . . to know that you are protected from loss of income due to illness or accident'

"Dr. Carefree" has no 30-day sick leave . . . no Workmen's Compensation . . . BUT he has a modern emergency INCOME PROTECTION PLAN with Mutual of Omaha.

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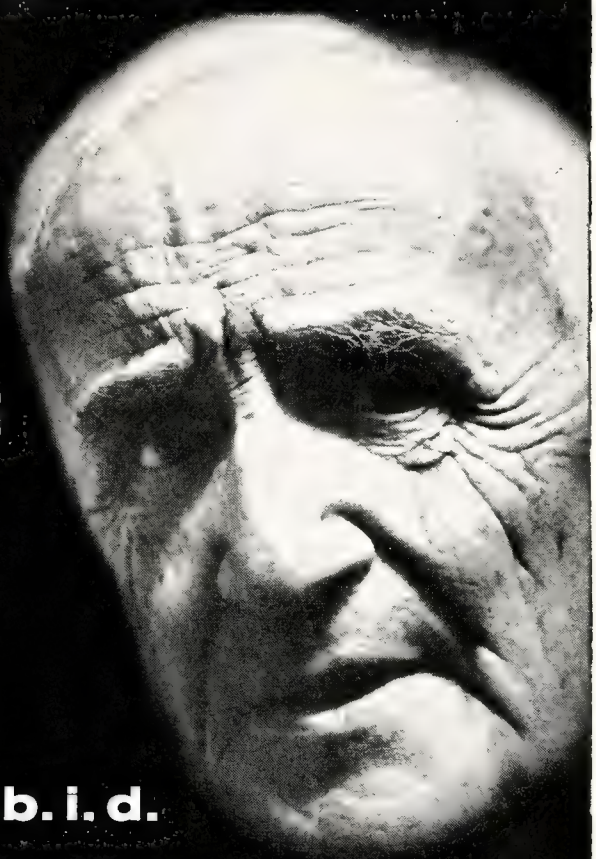
IN SENILE CONFUSION . . .

CONTINUOUS CEREBRAL OXYGENATION

WITH

ONE

Geroniazol TT* b.i.d.

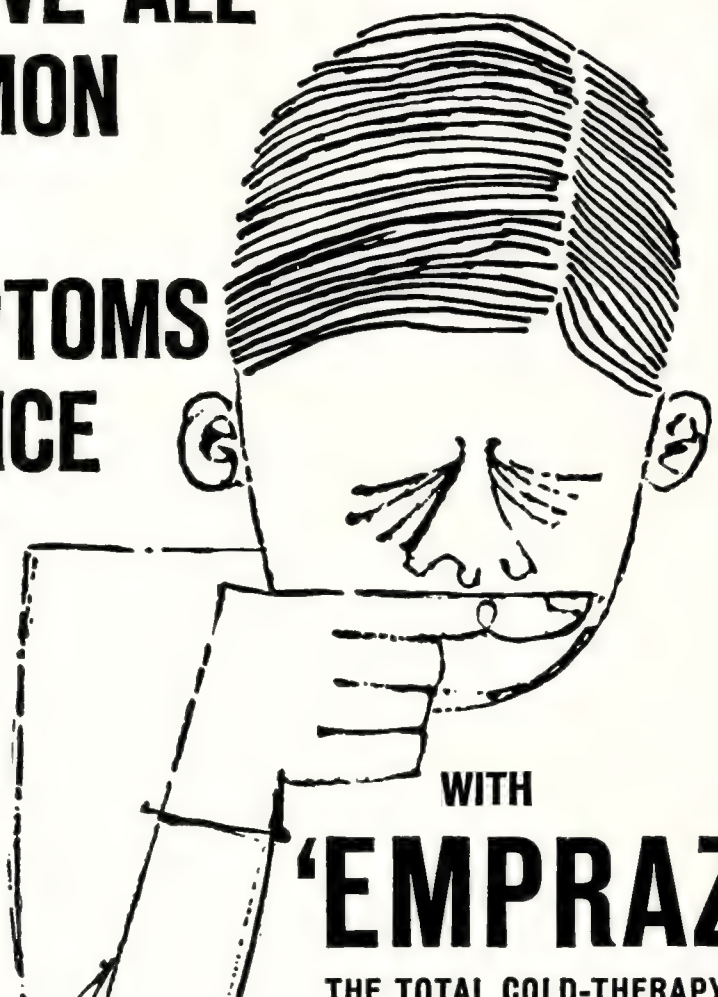


- Each Geroniazol TT tablet contains:
  Pentylenetetrazol .....300 mg.
  Nicotinic Acid .....150 mg.
- Indications: Respiratory and circulatory stimulant for the aged and debilitated patient with symptoms of mental confusion, depression or atherosclerotic psychosis.
- Supplied: Bottles of 42 Tablets (3 weeks' treatment)

* TEMPOTROL (Time Controlled Therapy)

COLUMBUS PHARMACAL COMPANY
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RELIEVE ALL COMMON COLD SYMPTOMS AT ONCE



WITH

'EMPRAZIL'®

THE TOTAL COLD-THERAPY TABLET

nasal decongestant · analgesic antipyretic · antihistamine

The ingredients combined in each 'Emprazil' tablet provide multiple drug action for prompt symptomatic relief of aches, pains, fever and respiratory congestion—due to common colds, flu or grippe—without gastric irritation.

Dosage: Adults and older children—One or two tablets t.i.d. as required. Children 6 to 12 years of age—One tablet t.i.d. as required.

Supplied: Bottles of 100 or 1000

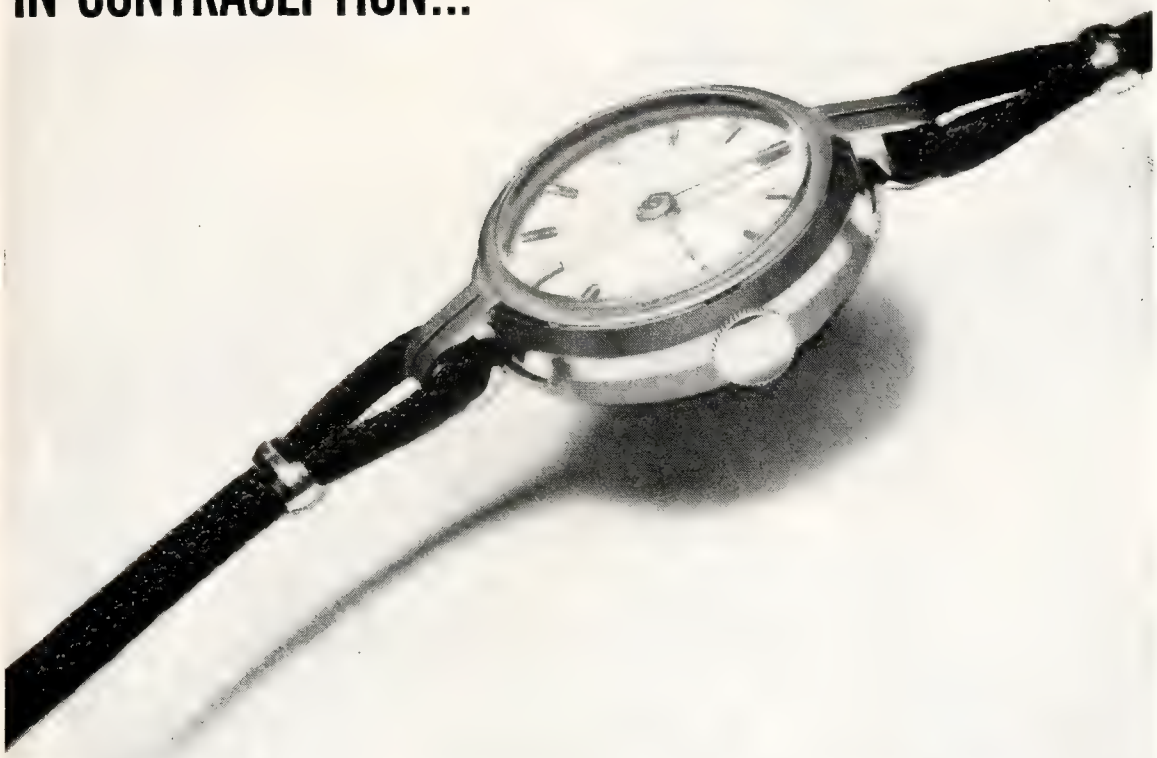
Each orange and yellow layered tablet contains:

'Sudafed'® brand Pseudoephedrine Hydrochloride	20 mg.
'Perazil'® brand Chlorcyclizine Hydrochloride	15 mg.
Acetophenetidin	150 mg.
Aspirin (Acetylsalicylic Acid)	200 mg.
Caffeine	30 mg.

Complete literature available on request.

BURROUGHS WELLCOME & CO.
(U.S.A.) INC., Tuckahoe, N. Y.

IN CONTRACEPTION...



WHY IS SPEEDIER SPERMICIDAL ACTION IMPORTANT?

Because a swift-acting spermicide best meets the variables of spermatozoan activity.

Lanesta Gel, "...found to immobilize human spermatozoa in one-third to one-eighth the time required by five of the leading contraceptive products currently available . . ."* thus provides the *extra* margin of assurance in conception control. The accelerated action of Lanesta Gel — it kills sperm in minutes instead of hours — may well mean the difference between success and failure.

**Berberian, D. A., and Slighter, R. G.: J.A.M.A.* 168:2257 *(Dec. 27) 1958.*

In Lanesta Gel 7-*chloro-4-indanol,* a new, effective, nonirritating, nonallergenic spermicide produces immediate immobilization of spermatozoa in dilution of up to 1:4,000. Spermicidal action is greatly accelerated by the addition of 10% NaCl in ionic form. Ricinoleic acid facilitates the rapid inactivation and immobilization of spermatozoa and sodium lauryl sulfate acts as a dispersing agent and spermicidal detergent.

Lanesta Gel with a diaphragm provides one of the most effective means of conception control. However, whether used with or without a diaphragm, the patient and you, doctor, can be certain that Lanesta Gel provides faster spermicidal action — plus essential diffusion and retention of the spermicidal agents in a position where they can act upon the spermatozoa.



new Lanesta® Gel

Supplied: Lanesta Exquiset . . . with diaphragm of prescribed size and type; universal introducer; Lanesta Gel, 3 oz. tube, with easy clean applicator, in an attractive purse. Lanesta Gel, 3 oz. tube with applicator; 3 oz. refill tube — available at all pharmacies.

Manufactured by Esta Medical Laboratories, Inc., Alliance, Ohio Distributed by GEORGE A. BREON & CO., New York 18, N. Y.

A product of Lanteen® research.



Now...the only Nystatin combination with extra-active DECLOMYCIN®
Demethylchlortetracycline

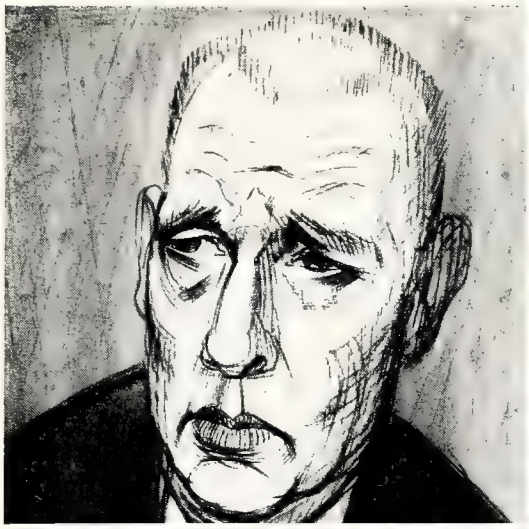
with extra-broad spectrum benefits:— action at lower milligram intake...broad-range action...sustained peak activity... extra-day security against resurgence of primary infection or secondary invasion.

DECLOSTATIN®

Demethylchlortetracycline and Nystatin LEDERLE

CAPSULES, *150 mg. DECLOMYCIN Demethylchlortetracycline HCl and 250,000 units Nystatin.*
DOSAGE: *average adult, 1 capsule four times daily.*

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



whenever depression complicates the picture

Tofrānil®
brand of imipramine HCl



hastens recovery

Geigy

In many seemingly mild physical disorders an element of depression plays an insidious etiologic or complicating role.

Because of its efficacy as an antidepressant, coupled with its simplicity of usage, Tofrānil is admirably adapted to use in the home or office in these milder "depression-complicated" cases.

It is always wise to recognize that depression may be an underlying factor...that Tofrānil may speed recovery in "hypochondriasis"; in convalescence when recovery is inexplicably prolonged; in chronic illness with dejection; in the menopausal patient whose emotional disturbances resist hormone therapy; and in many other comparable situations in which latent depression may play a part.

Detailed Literature Available on Request.

Tofrānil®, brand of imipramine hydrochloride, tablets of 25 mg. Ampuls for intramuscular administration, 25 mg. in 2 cc. of solution.

Geigy, Ardsley, New York

160-60



REGULATORS

"Essential" fatty acids . . . arachidonic and linoleic . . . and fat-soluble vitamins . . . A, D and K . . . can be obtained from everyday foods. These nutrients serve essential but obscure roles in maintenance of body membranes and skin. Intestinal absorption of calcium, mineralization of bone and teeth, and clotting of blood.

From foods listed in *A Guide to Good Eating*, the "essential" fatty acids are obtained from the fat present in milk, cheese, ice cream, butter, eggs, meat, fish, poultry, nuts . . . and in larger amounts, from some natural fats and oils used in food preparation and at table. Vitamin A value is generously supplied by milk fat in dairy foods, eggs, dark green leafy vegetables, yellow vegetables and fruits.

Vitamin D . . . important for absorption and utilization of calcium during growth, pregnancy and lactation . . . is not amply provided by foods listed in the "Guide" . . . unless vitamin D-fortified milk is used in recommended amounts. Vitamin D can be formed in the skin if it is exposed to sunlight or ultraviolet lamp.

Many foods listed in the "Guide" supply vitamins E and K . . . i. e. green leafy vegetables, nuts and dairy foods containing milkfat. Plant oils used for salads or food preparation are rich in vitamin E. Microorganisms form vitamin K in the intestines.

A GUIDE TO GOOD EATING — USE DAILY DAIRY FOODS

3 to 4 glasses milk—children • 4 or more glasses—teenagers • 2 or more glasses—adults • Cheese, ice cream and other milk-made foods can supply part of the milk

MEAT GROUP

2 or more servings • Meats, fish, poultry, eggs, or cheese with dry beans, peas, nuts as alternates

VEGETABLES AND FRUITS

4 or more servings • Include dark green or yellow vegetables; citrus fruit or tomatoes

BREADS AND CEREALS

4 or more servings • Enriched or whole-grain added milk improves nutritional values

When combined in well-prepared meals, foods selected from each of the four food groups can provide all of the necessary fat-soluble vitamins and fatty acids . . . while satisfying the tastes, appetites and other nutrients needs of all members of the family . . . young and old.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

Since 1915 . . . promoting better health through nutrition research and education.

NATIONAL DAIRY COUNCIL
A non-profit organization
111 N. Canal Street • Chicago 6, Ill.

Salute to the American Dental Association on A Century of Health Service

This information is reproduced in the interest of good nutrition and health by the Dairy Council Units in North Carolina.

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For the Best Years of Their Lives



NICOZOL® COMPLEX

ORIGINAL FORMULA

Ideal New Geriatric Tonic Stimulant

NICOZOL COMPLEX is a cerebral stimulant-tonic and dietary supplement intended for geriatric use. Improves mental and physical well-being. Improves protein and calcium metabolism. Indicated during convalescence, also as a preventive agent in common degenerative changes.

Dosage:

1 teaspoonful (5 cc) 3 times a day, preferably before meals. Female patients should follow each 21-day course with a 7-day rest interval.

Supply:

NICOZOL COMPLEX is available as a pleasant-tasting elixir. Popularly priced. Bottles of 1 pint and 1 gallon.

Formula

Each 15 cc (3 teaspoonfuls) contains:

Pentylenetetrazol	150 mg.
Niacin	75 mg.
Methyl Testosterone	2.5 mg.
Ethinyl Estradiol	0.02 mg.
Thiamine Hydrochloride	6 mg.
Riboflavin	3 mg.
Pyridoxine Hydrochloride	6 mg.
Vitamin B-12	2 mcg.
Folic Acid	0.33 mg.
Panthenol	5 mg.
Choline Bitartrate	20 mg.
Inositol	15 mg.
1-Lysine Monohydrochloride	100 mg.
Vitamin E (a-Tocopherol Acetate)	3 mg.
Iron (as Ferric Pyrophosphate)	15 mg.

Trace Minerals as: Iodine 0.05 mg., Magnesium 2 mg., Manganese 1 mg., Cobalt 0.1 mg., Zinc 1 mg.

Contains 15% Alcohol

Write for professional sample and literature.

DRUG Specialties INC.

WINSTON-SALEM 1, NORTH CAROLINA

REFER TO PDR



IN COLDS AND SINUSITIS— THE RIGHT AMOUNT OF "INNER SPACE" RIGHT AWAY

Neo-Synephrine hydrochloride relieves the boggy feeling of colds immediately and safely, without causing systemic toxicity or chemical harm to nasal membranes. Turbinates shrink, sinus ostia open, ventilation and drainage resume, and mouth-breathing is no longer necessary.

Gentle Neo-Synephrine shrinks nasal membranes for from two to three hours without stinging or harming delicate respiratory tissues. Post-therapeutic turgescence is minimal. Neo-Synephrine does not lose its effectiveness with repeated applications nor does it cause central nervous stimulation, jitters, insomnia or tachycardia.

Winthrop LABORATORIES
New York 18, N. Y.

Neo-Synephrine solutions and sprays produce shrinkage of tissue without interfering with ciliary activity or the protective mucous blanket.

NEO-SYNEPHRINE®
(Brand of phenylephrine hydrochloride)
hydrochloride
NASAL SOLUTIONS AND SPRAYS

For wide latitude of effective and safe treatment, Neo-Synephrine hydrochloride is available in nasal sprays for adults and children; in solutions from 1/8% to 1%; and in aromatic solution and water soluble jelly.



BETTER GET YOURS FIRST DOCTOR!

Money goes fast at Christmas time, Doctor . . . best you start getting yours now.

And one of the best ways to get your money before December spending starts, is to call the Medical-Dental Credit Bureau nearest you today. They'll clear up your overdue accounts . . . in an ethical, courteous manner . . . and keep your patients happy, too.

Yes, to beat those December charge accounts to the draw, call your Medical-Dental Credit Bureau NOW!

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212 West Franklin Street

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A private hospital for diagnosis and treatment of psychiatric and neurological patients.
Hospital and out-patient services.

(Organic diseases of the nervous system, psychoneuroses, psychosomatic disorders, mood disturbances, social adjustment problems, involutional reactions and selective psychotic and alcoholic problems.)

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Avoid Heart Strain and Fatigue with a Home Elevator

Inclin-ator travels up and down stairways—Elevette fits snugly into closet space. Ideal for invalids and older folks, with safe push-button controls. Uses ordinary house current. Used in hundreds of nearby homes. Call or write today for free survey.

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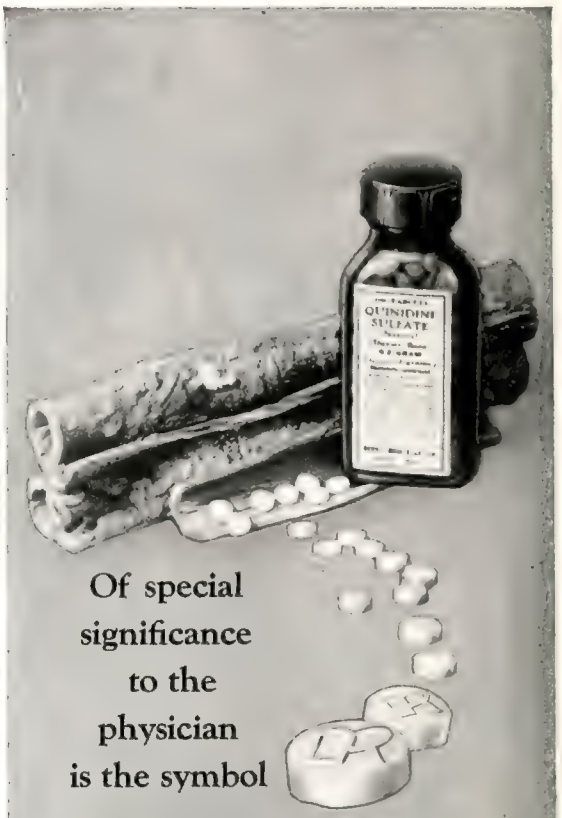
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PHYSICIANS CASUALTY & HEALTH ASSOCIATIONS

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Since 1902

Handsome Professional Appointment Book sent to you FREE upon request.



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When he sees it engraved on a Tablet of Quinidine Sulfate he has the assurance that the Quinidine Sulfate is produced from Cinchona Bark, is alkaloidally standardized, and therefore of unvarying activity and quality.

When the physician writes "DR" (Davies, Rose) on his prescriptions for Tablets Quinidine Sulfate, he is assured that this "quality" tablet is dispensed to his patient.

Rx Tablets Quinidine Sulfate Natural
0.2 Gram (or 3 grains)
Davies, Rose

Clinical samples sent to physicians on request

Davies, Rose & Company, Limited
Boston 18, Mass.

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FOR THE TREATMENT OF PSYCHIATRIC ILLNESSES

AND PROBLEMS OF ADDICTION

MODERN FACILITIES

Approved by Central Inspection Board of American Psychiatric Association and the Joint Committee on Accreditation

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Medical Director

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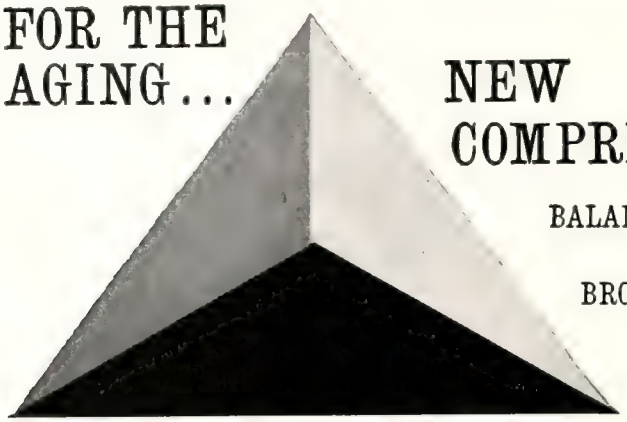
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1. Shapleigh, J. B.: Ferrous Fumarate, A Clinical Trial of A New Iron Compound, Am. Pract. Dig. Treat.; March, 1959.
2. Feldman, Harold S.: Ferrous Fumarate in the Treatment of Iron Deficiency Anemia, Va. Med. Monthly, Vol. 87, April, 1960.
3. Lancet (editorial) 2: 923, 1953.
4. Quart. J. Med. 22:309, 1953 and Blood 7:671, 1952.

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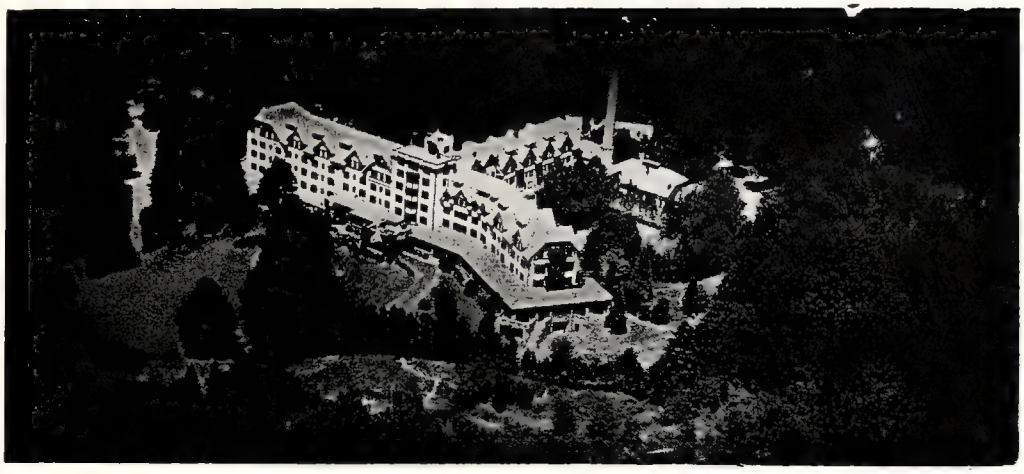
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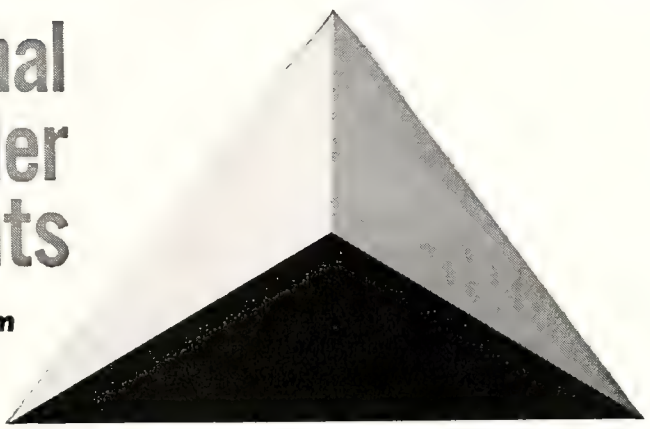
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References: (1) Goodier, T. E. W., & Parry, W. R.: *Lancet* **1**:356, 1959. (2) Modarress, Y.; Ryan, R. J., & Francis, Sr. C.: *J. M. Soc. New Jersey* **57**:168, 1960. (3) Petersdorf, R. G., *et al.*: *Arch. Int. Med.* **105**:398, 1960. (4) Rebhan, A. W., & Edwards, H. E.: *Canad. M.A.J.* **82**:513, 1960. (5) Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* **173**:475, 1960. (6) Olarte, J., & de la Torre, J. A.: *Am. J. Trop. Med.* **8**:324, 1959. (7) Berle, B. B., *et al.*: *New York J. Med.* **59**:2383, 1959. (8) Fisher, M. W.: *Arch. Int. Med.* **105**:413, 1960.

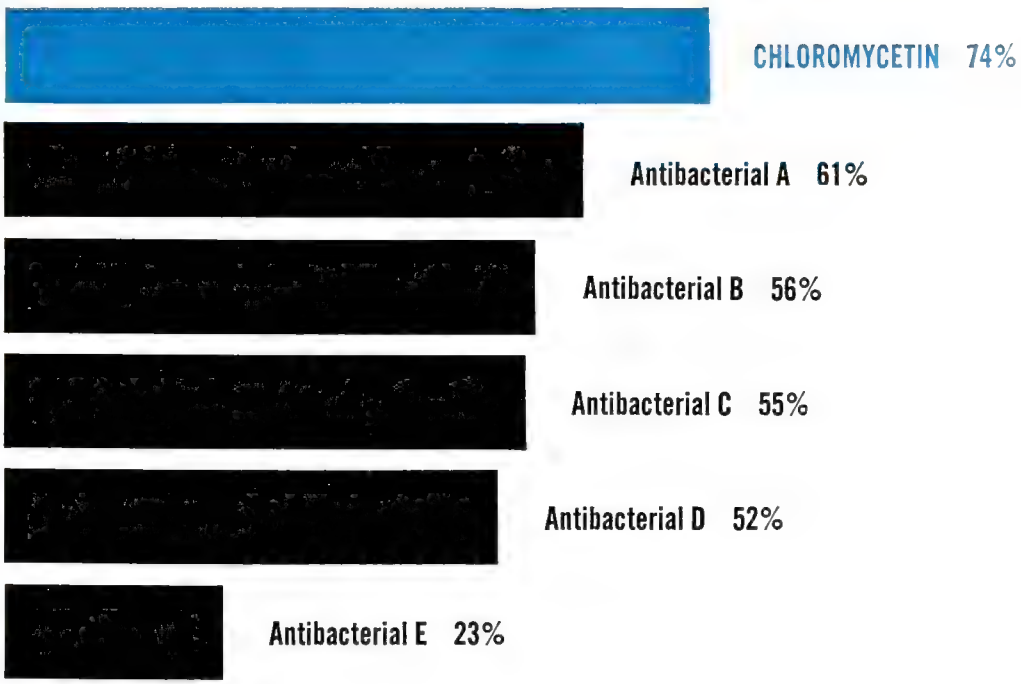
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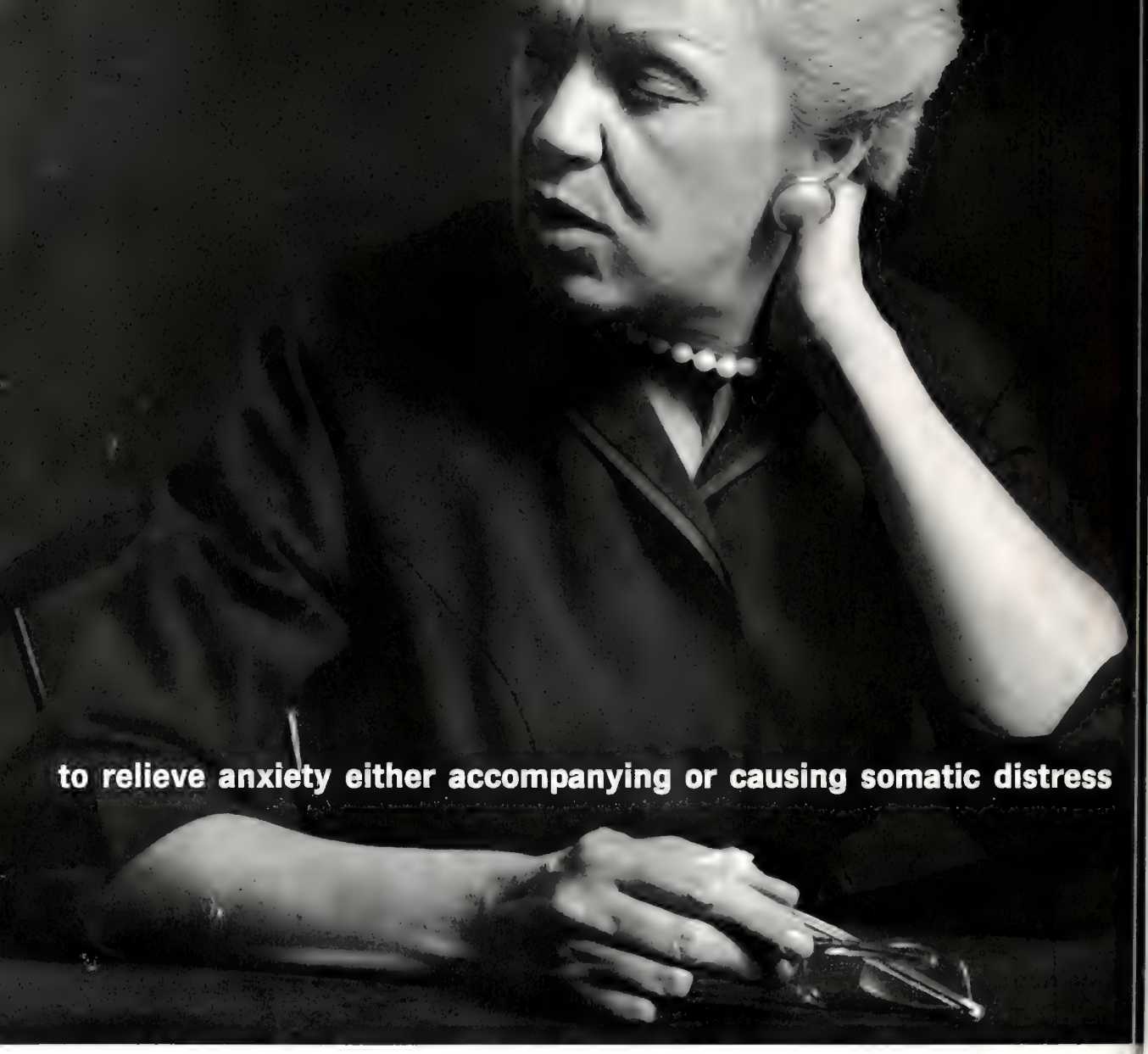
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1. Marx, F.J., in *Trifluoperazine: Further Clinical and Laboratory Studies*, Philadelphia, Lea & Febiger, 1959, p. 89
2. Winkelman, N.W., Jr., *ibid.*, p. 78.

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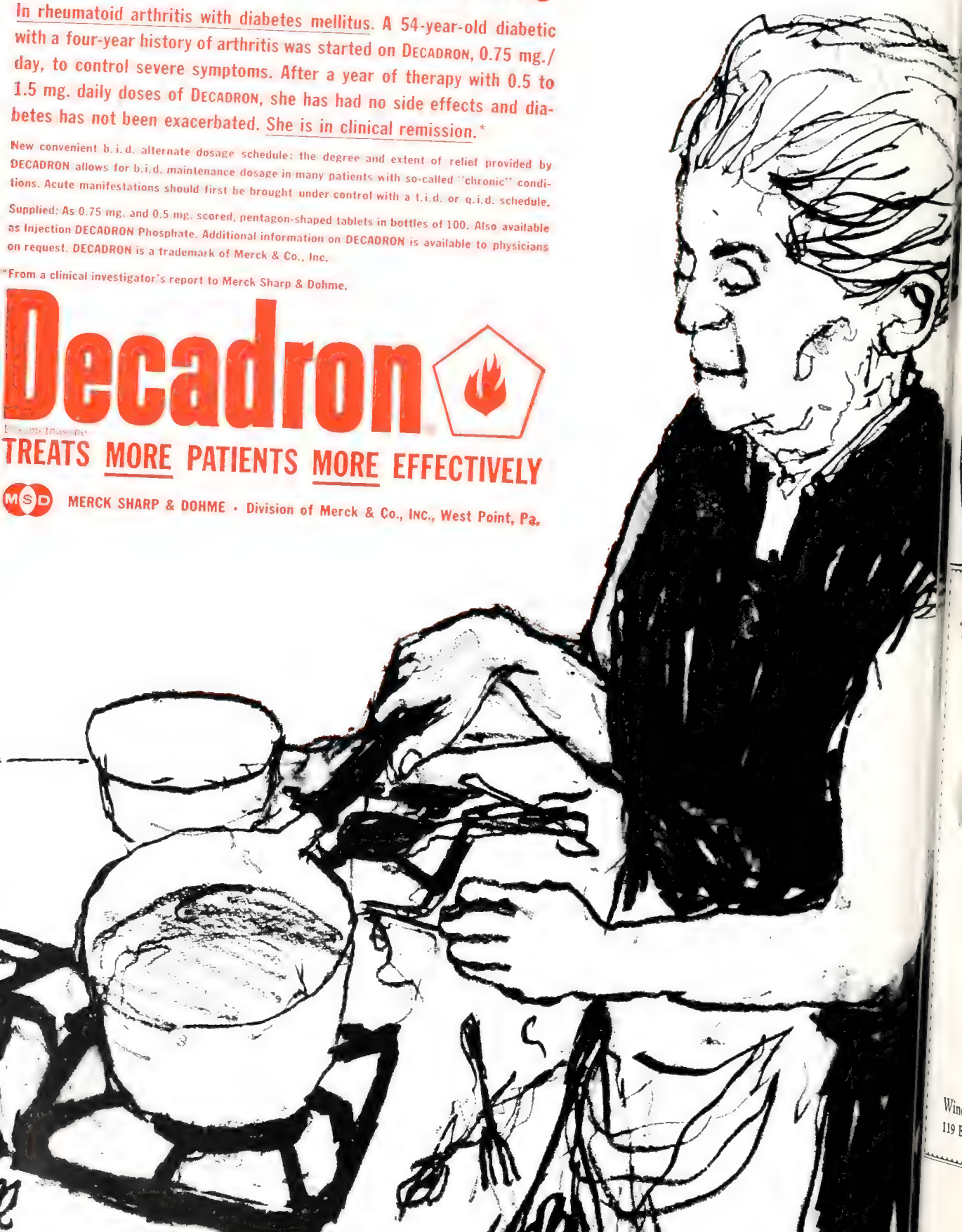
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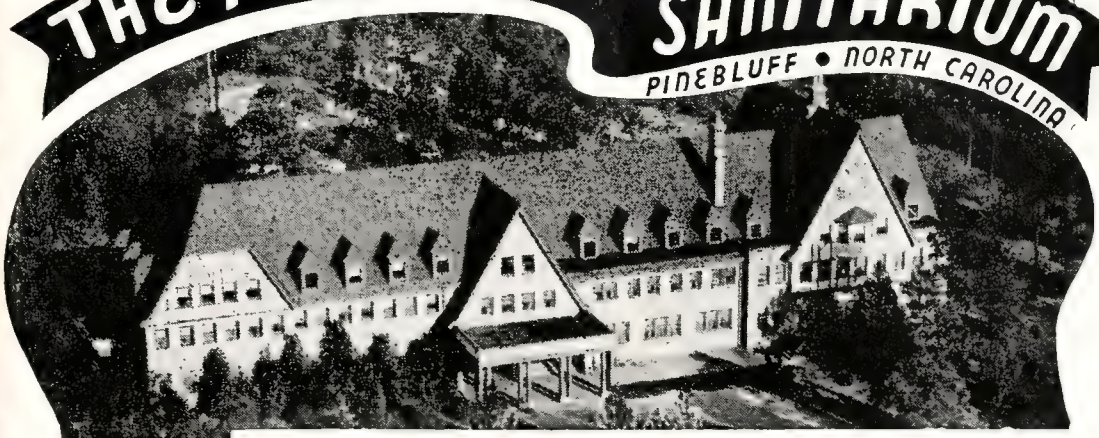
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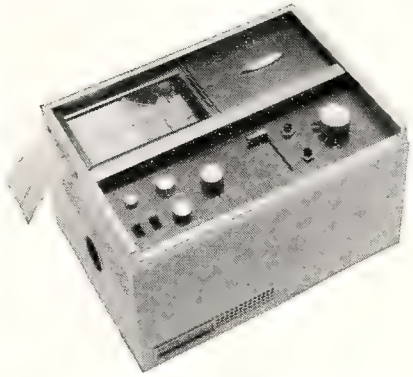
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OF ORAL
PENICILLIN G and
PENICILLIN G SULFONAMIDES



K.P.G. — 400

400,000 Units Potassium Penicillin G Buffered, in each yellow, scored tablet.

HONEY-CILLIN '400'

2 **400,000 Units Buffered Penicillin G in each 5 cc. Honey-Cherry flavor. Red color. 60 cc. size bottles.**

TRIFONACIL—250 LIQUID

3 **Triple sulfas 0.5 Gm., Buffered Penicillin G, 250,000 units in each 5 cc. Strawberry flavored, liquid.**

HONEY-CILLIN '300'

4 **300,000 Units Buffered Penicillin G in each 5 cc. Honey flavor. Yellow color. 60 cc. size bottles.**

TRIFONACIL—250 TABLETS

5 **Triple sulfas 0.5 Gm., Buffered Penicillin G, 250,000 units in each scored, pink tablet.**

SAMPLES AND LITERATURE GLADLY SENT UPON REQUEST

PHYSICIANS PRODUCTS CO., INC.
PETERSBURG, VIRGINIA

ANNOUNCING—
SPECIFICALLY FOR
INFECTIONS DUE TO
"RESISTANT" STAPHYLOCOCCI

AN ENTIRELY NEW SYNTHETIC
"STAPH-CIDAL" PENICILLIN

Staphcillin™

sodium dimethoxyphenyl penicillin
FOR INJECTION

UNIQUE—BECAUSE IT
RETAINS ANTIBACTERIAL
ACTIVITY IN THE PRESENCE OF
STAPHYLOCOCCAL PENICILLINASE
WHICH INACTIVATES
OTHER PENICILLINS

Bristol™

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NEW SYNTHETIC PENICILLIN FOR "RESISTANT" STAPH

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OFFICIAL PACKAGE CIRCULAR
November, 1960

STAPHCILLIN™

(sodium dimethoxyphenyl penicillin)

For Injection

DESCRIPTION

STAPHCILLIN is a unique new synthetic parenteral penicillin produced by Bristol Laboratories for the specific treatment of staphylococcal infections due to resistant organisms. Its uniqueness resides in its property of resisting inactivation by staphylococcal penicillinase. It is active against strains of staphylococci which are resistant to other penicillins.

Each dry filled vial contains: 1 Gm. STAPHCILLIN (sodium dimethoxyphenyl penicillin), equivalent to 900 mg. dimethoxyphenyl penicillin activity.

INDICATIONS

STAPHCILLIN is recommended as specific therapy only in infections due to strains of staphylococci resistant to other penicillins, e.g.:

Skin and soft tissue infections: cellulitis, wound infections, carbuncles, pyoderma, furunculosis, lymphangitis and lymphadenitis.

Respiratory infections: staphylococcal lobar or bronchopneumonia, and lung abscesses combined with indicated surgical treatment.

Other infections: staphylococcal septicemia, bacteremia, acute or subacute endocarditis, acute osteomyelitis and enterocolitis.

Infections due to penicillin-sensitive staphylococci, streptococci, pneumococci and gonococci should be treated with Syncillin™ or parenteral penicillin G rather than STAPHCILLIN. Treponemal infections should be treated with parenteral penicillin G.

DOSAGE AND ADMINISTRATION

STAPHCILLIN is well tolerated when given by deep intragluteal or intravenous injection.

As is the case with other antibiotics, the duration of therapy should be determined by the clinical and bacteriological response of the patient. Therapy should be continued for at least 48 hours after the patient has become afebrile, asymptomatic and cultures are negative. The usual duration has been 5-7 days.

Intramuscular route: The usual adult dose is 1 Gm. every 4 or 6 hours. Infants' and children's dosage is 25 mg. per Kg. (approximately 12 mg. per pound) every 6 hours.

Intravenous route: 1 Gm. every 6 hours using 50 ml. of sterile saline solution at the rate of 10 ml. per minute.

**Warning:* Solutions of STAPHCILLIN and kanamycin should not be mixed, as they rapidly inactivate each other. Data on the results of mixing STAPHCILLIN with other antibiotics are being accumulated.

DIRECTIONS FOR RECONSTITUTION

Add 1.5 ml. sterile distilled water or normal saline to a 1 Gm. vial and shake vigorously. Withdraw the clear, reconstituted solution (2.0 ml.) into a syringe and inject. The reconstituted solution contains 500 mg. of STAPHCILLIN per ml. Reconstituted solutions are stable for 24 hours under refrigeration.

For intravenous use, dilute the reconstituted dose in 50 ml. of sterile saline and inject at the rate of 10 ml. per minute.

*This statement supersedes that in the Official Package Circulars dated September and/or October 1960

(continued)

MICROBIOLOGICAL AND PHARMACOLOGICAL PROPERTIES

In vitro studies show that STAPHCILLIN is a bactericidal penicillin with activity against staphylococci resistant to penicillin G. Strains of staphylococci so far tested have been sensitive to STAPHCILLIN *in vitro* at concentrations of 1-6 mcg. per ml. These levels are readily attained in the blood and tissues by administration of STAPHCILLIN at the recommended dosage. This unique attribute is probably due to the fact that STAPHCILLIN is stable in the presence of staphylococcal penicillinase. STAPHCILLIN also resists degradation by *B. cereus* penicillinase. The antimicrobial spectrum of STAPHCILLIN with regard to other microorganisms is qualitatively similar to that of penicillin G; but considerably higher concentrations of STAPHCILLIN are required for bactericidal activity than is the case with penicillin G.

STAPHCILLIN is rapidly absorbed after intramuscular injection. Peak blood levels (6-10 mcg./ml. on the average after a 1.0 Gm. dose) are attained within 1 hour; and then progressively decline to less than 1 mcg. over a 4 to 6 hour period. It is poorly absorbed from the gastrointestinal tract. STAPHCILLIN is rapidly excreted by the kidney.

As shown by animal studies, STAPHCILLIN is readily distributed in body tissues after intramuscular injection. Of the tissues studied, highest concentrations are reached in the kidney, liver, heart and lung in that order; the spleen and muscles show lower concentrations of the antibiotic. STAPHCILLIN diffuses into human pleural and prostatic fluids, but its diffusion into the spinal fluid has not yet been completely studied. However, one patient with meningitis showed a significant concentration in his spinal fluid while on STAPHCILLIN therapy.

Toxicity studies with STAPHCILLIN and penicillin G in animals show that they have approximately the same low order of toxicity.

Certain staphylococci can be made resistant to STAPHCILLIN in the laboratory, but this resistance is not related to their penicillinase production. During the clinical trials, no STAPHCILLIN-resistant strains of staphylococci were observed or developed; the possibility of the emergence of such strains in the clinical setting awaits further observation.

PRECAUTIONS

During the clinical trials, several mild skin reactions, e.g., itching, papular eruption and erythema were observed both during and after discontinuance of STAPHCILLIN therapy. Patients with histories of hay fever, asthma, urticaria and previous sensitivity to penicillin are more likely to react adversely to the penicillins. It is important that the possibility of penicillin anaphylaxis be kept in mind. Epinephrine and the usual adjuvants (antihistamines, corticosteroids) should be available for emergency treatment. Because of the resistance of STAPHCILLIN to destruction by penicillinase, parenteral *B. cereus* penicillinase may not be effective for the treatment of allergic reactions. Information with regard to cross-allergenicity between penicillin G, penicillin V, phenethicillin (Syncillin) and STAPHCILLIN is not available at present. If superinfection due to Gram-negative organisms or fungi occurs during STAPHCILLIN therapy, appropriate measures should be taken.

SUPPLY

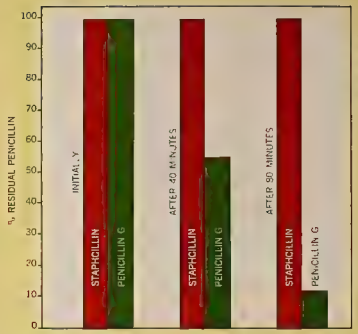
List 79502 — 1.0 Gm. dry filled vial.

BRISTOL LABORATORIES · SYRACUSE, NEW YORK
Division of Bristol-Myers Company

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UNIQUE "SYNTHETIC" "STAPH-CIDAL" PENICILLIN

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In the presence of staphylococcal penicillinase, STAPHCILLIN remained active and retained its antibacterial action. By contrast, penicillin G was rapidly destroyed in the same period of time. *(After Gourevitch et al., to be published)*

Specifically for "resistant" staph...

Staphcillin™

sodium dimethoxyphenyl penicillin
FOR INJECTION

The failure of staphylococcal infections to respond to penicillin therapy is attributed to the penicillin-destroying enzyme, penicillinase, produced by the invading staphylococcus.

Unlike other penicillins:

1 STAPHCILLIN is effective because it retains its antibacterial activity despite the presence of staphylococcal penicillinase.

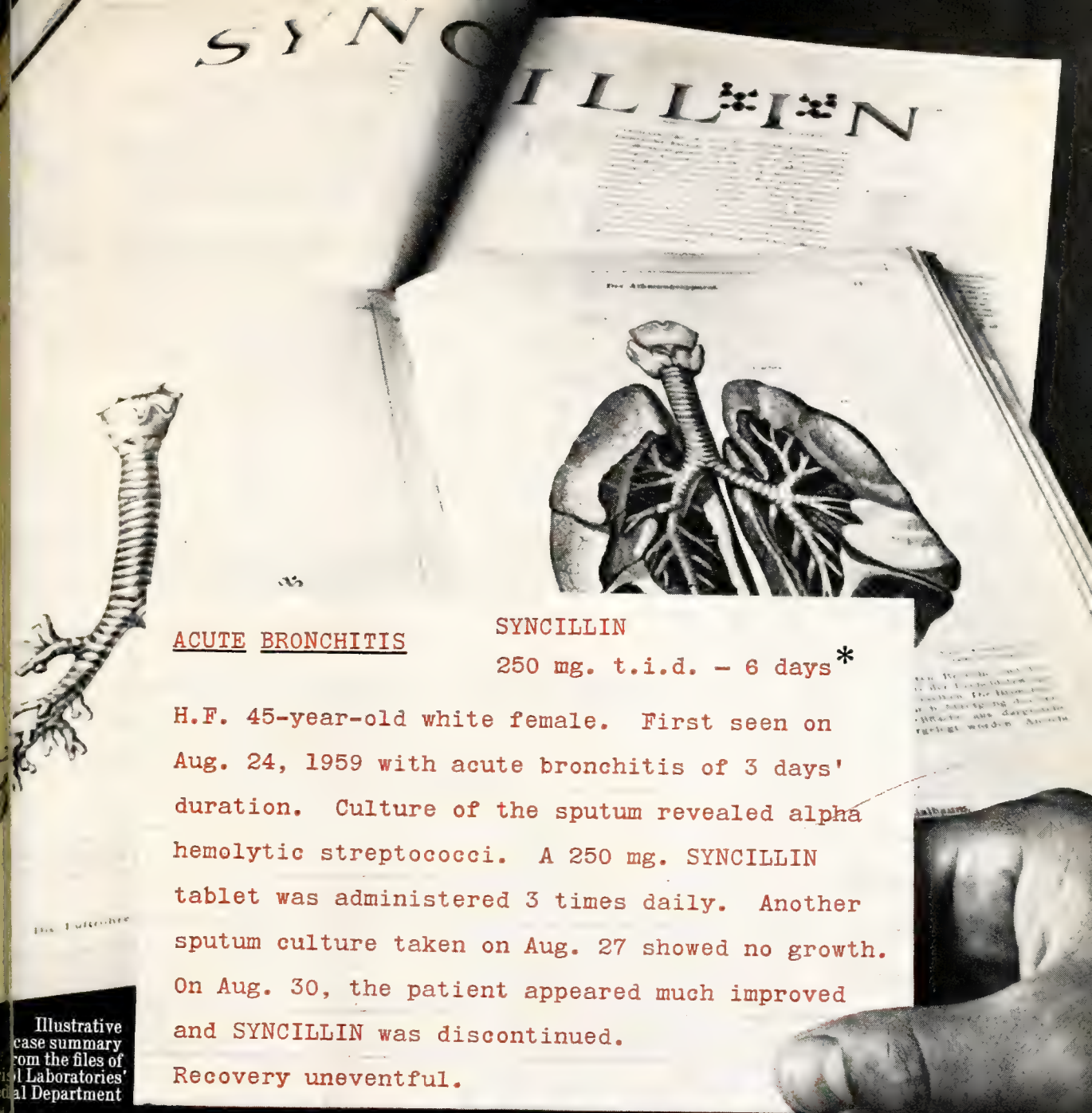
2 The clinical effectiveness of STAPHCILLIN has been confirmed by dramatic results in a wide variety of infections due to "resistant" staphylococci, many of which were serious and life-threatening.

Like other penicillins:

STAPHCILLIN has no significant systemic toxicity. It is well tolerated locally, and pain or irritation at the injection site is comparable to that following the injection of penicillin G. *In occasional cases, typical penicillin reactions may be experienced.*

PROFESSIONAL INFORMATION SERVICE — The attached Official Package Circular provides complete information on the indications, dosage, and precautions for the use of STAPHCILLIN. If you desire additional information concerning clinical experiences with STAPHCILLIN, the Medical Department of Bristol Laboratories is at your service. You may direct your inquiries via collect telephone call to New York, PLaza 7-7061, or by mail to Medical Department, Bristol Laboratories, 630 Fifth Ave., N. Y. 20, N. Y.

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ACUTE BRONCHITIS

SYNCILLIN
250 mg. t.i.d. – 6 days*

H.F. 45-year-old white female. First seen on Aug. 24, 1959 with acute bronchitis of 3 days' duration. Culture of the sputum revealed alpha hemolytic streptococci. A 250 mg. SYNCILLIN tablet was administered 3 times daily. Another sputum culture taken on Aug. 27 showed no growth. On Aug. 30, the patient appeared much improved and SYNCILLIN was discontinued. Recovery uneventful.

Illustrative case summary om the files of l Laboratories' al Department

THE ORIGINAL phenethicillin

SYNCILLIN®

(phenoxyethyl penicillin potassium)

IRST SYNTHESIZED AND MADE AVAILABLE BY BRISTOL LABORATORIES

dosage form to meet the individual requirements of patients of all ages in home, office, clinic, and hospital:
ncillin Tablets – 250 mg. (400,000 units)... Syncillin Tablets – 125 mg. (200,000 units)
ncillin for Oral Solution – 60 ml. bottles – when reconstituted, 125 mg. (200,000 units) per 5 ml.
ncillin Pediatric Drops – 1.5 Gm. bottles. Calibrated dropper delivers 125 mg. (200,000 units)

reptococcal infections should be treated for at least 10 days to prevent the development of rheumatic fever d as prophylaxis against bacterial endocarditis in susceptible patients.

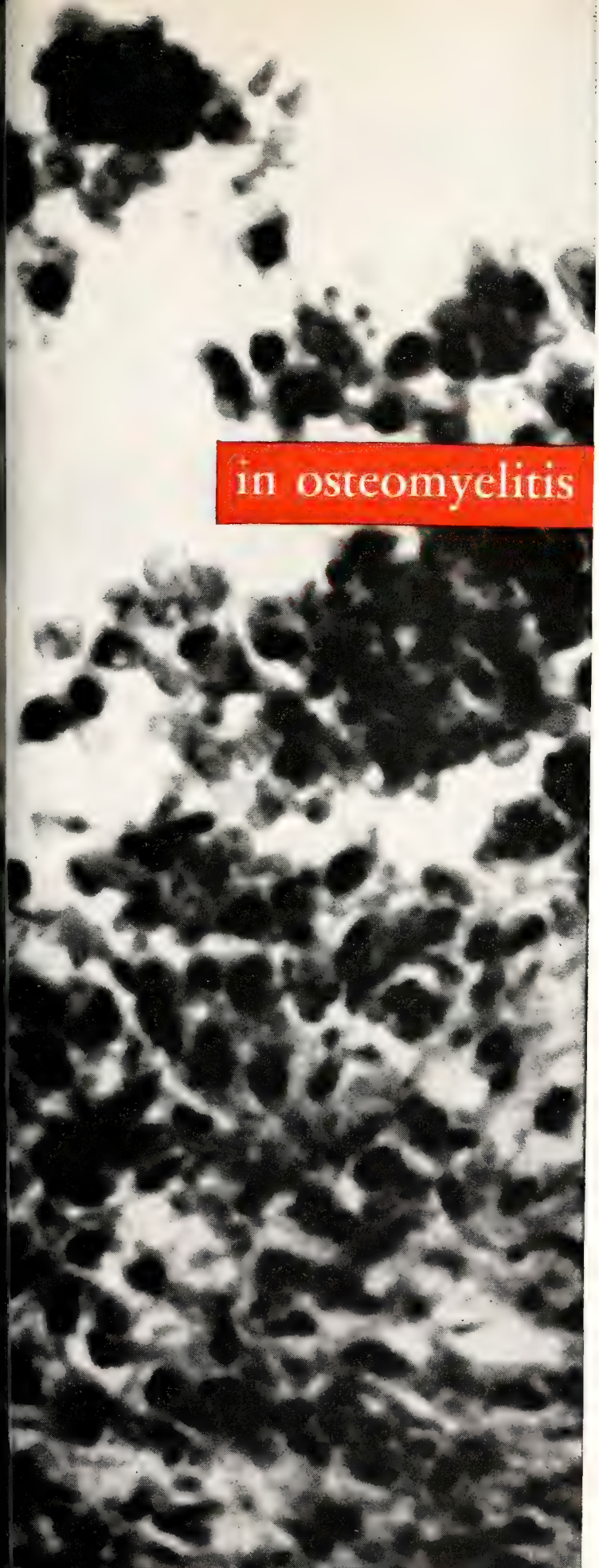
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BRISTOL LABORATORIES, Div. of Bristol-Myers Co., SYRACUSE, N.Y.

BRISTOL™



Bone section: erosion and purulent exudate



Therapeutic confidence

Panalba is effective against more than 30 commonly encountered pathogens including ubiquitous staphylococci. Right from the start, prescribing it gives you a high degree of assurance of obtaining the desired anti-infective action in this as in a wide variety of bacterial diseases.

Supplied: Capsules, each containing Panmycin* Phosphate (tetracycline phosphate complex), equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin,* as novobiocin sodium, in bottles of 16 and 100.

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Dosage: 2 Tablets B.I.D. (A.M. & P.M.)

[redacted]

in premenstrual tension

only neo Bromth

treats the whole syndrome





It was the introduction of neo Bromth several years ago that created such widespread interest in the premenstrual syndrome—because of neo Bromth's specific ability to prevent the development of the condition in the first place.

The action of neo Bromth is not limited merely to control of abnormal water retention, or of nervousness, or of pain—or any other single or several of the multiple manifestations characteristic of premenstrual tension. neo Bromth effectively controls the *whole* syndrome.

neo Bromth is also completely free from the undesirable side effects associated with such limited-action therapy as ammonium chloride, hormones, tranquilizers and potent diuretics. neo Bromth has continued to prove to be the safest—as well as the most effective—treatment for premenstrual tension.

Each 80 mg. tablet contains 50 mg. Pamabrom, and 30 mg. pyrilamine maleate. Dosage is 2 tablets twice daily (morning and night) beginning 5 to 7 days before menstruation. Discontinue when the flow starts.

BRAYTEN PHARMACEUTICAL COMPANY • Chattanooga 9, Tennessee



FIORINAL®

relieves pain,
muscle spasm,
nervous tension

rapid action • non-narcotic • economical

"We have found caffeine, used in combination with acetylsalicylic acid, acetophenetidin, and isobutylallylbarbituric acid, [Fiorinal] to be one of the most effective medicaments for the symptomatic treatment of headache due to tension."

Friedman, A. P., and Merritt, H. H.: J.A.M.A. *163*:1111 (Mar. 30) 1957.

Available: Fiorinal Tablets and New Form — Fiorinal Capsules

Each contains: Sandoptal (Allylbarbituric Acid N.F. X) 50 mg. (3/4 gr.), caffeine 40 mg. (2/3 gr.), acetylsalicylic acid 200 mg. (3 gr.), acetophenetidin 130 mg. (2 gr.).

SAUNDERS BOOKS



New!—A Manual and Atlas for the General Surgeon

Marble—The Hand

This unusual book is aimed at the needs of the general practitioner, general surgeon and industrial physician—the men who see hand injuries first. Full page plates and explicit text give you quick instructions on treating every type of hand injury you are likely to see—from *lacerations* and *puncture wounds* to *fractures* and *crushing injuries.*

Extensive coverage is given to closed injuries of the hand and their management: *contusions, swellings, avulsion of tendons, burns, sprains, frostbite, fractures and dislocations.* Open injuries are then considered. Beautiful drawings illustrate *methods of tendon advancement; repair of lacerated nerve; skin-graft; repair of traumatic amputation of finger; etc.* Separate chapters cover: splinting; infections; and tumors of the hand.

By HENRY C. MARBLE, M.D., F.A.C.S., Consulting Surgeon to the Massachusetts General Hospital. 207 pages, 6½"x9¾", illustrated. $7.00. *Ready January!*

New!—Solid Information on Every Phase of Modern Hypnotic Practice

Meares—A System of Medical Hypnosis

Here is sound advice on how to apply hypnosis safely and effectively in your everyday practice. Dr. Meares gives step-by-step instructions for each method of induction: by direct stare; by suggestions for relaxation; by arm levitation; etc. He gives practical help on choosing the right method of induction for a particular case.

You'll find suggestions for clinical use of hypnosis in relief of pain and insomnia; as an aid to diagnosis; and as an anesthetic agent. The value of hypnosis in obstetrics and delivery is clearly discussed—with methods, problems and complications pointed up in rich detail. There are useful hints on applying hypnosis in the treatment of various gynecologic disorders, chronic illness, psychogenetic obesity, and alcoholism.

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New!—Sound Advice on Meeting Hundreds of Surgical Hazards

Artz & Hardy—Complications in Surgery & Their Management

With the aid of 69 authorities, the editors have compiled a complete text on the pitfalls of surgery—from preoperative preparation through post-operative convalescence. The authors cover general complications that may occur in almost any type of surgery, such as infections, wound dehiscence, shock, transfusion reactions, etc. Next, the management of special problems of severe pain, anesthetic complications, nutritional problems and emotional crises is clearly described. More than half of the book is devoted to the specific complications that arise in particular surgical operations.

Comprehensive chapters detail complications of: *antibiotic therapy—radiation therapy—pulmonary resection—splenectomy—appendectomy—pediatric surgery—hernia repair—surgery of the breast—common fractures—burns—etc.*

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In over five years

Proven

in more than 750 published clinical studies

Effective

for relief of anxiety and tension

Outstandingly Safe

1. simple dosage schedule produces rapid, reliable tranquilization without unpredictable excitation
2. no cumulative effects, thus no need for difficult dosage readjustments
3. does not produce ataxia, change in appetite or libido
4. does not produce depression, Parkinson-like symptoms, jaundice or agranulocytosis
5. does not impair mental efficiency or normal behavior

Miltown®

meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.
Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets.
Also as MEPROTABS• — 400 mg. *unmarked*, coated tablets; and as MEPROSPAN® — 400 mg. and 200 mg. *continuous release* capsules.

WALLACE LABORATORIES / *Cranbury, N. J.*

•TRADE-MARK

of clinical use...



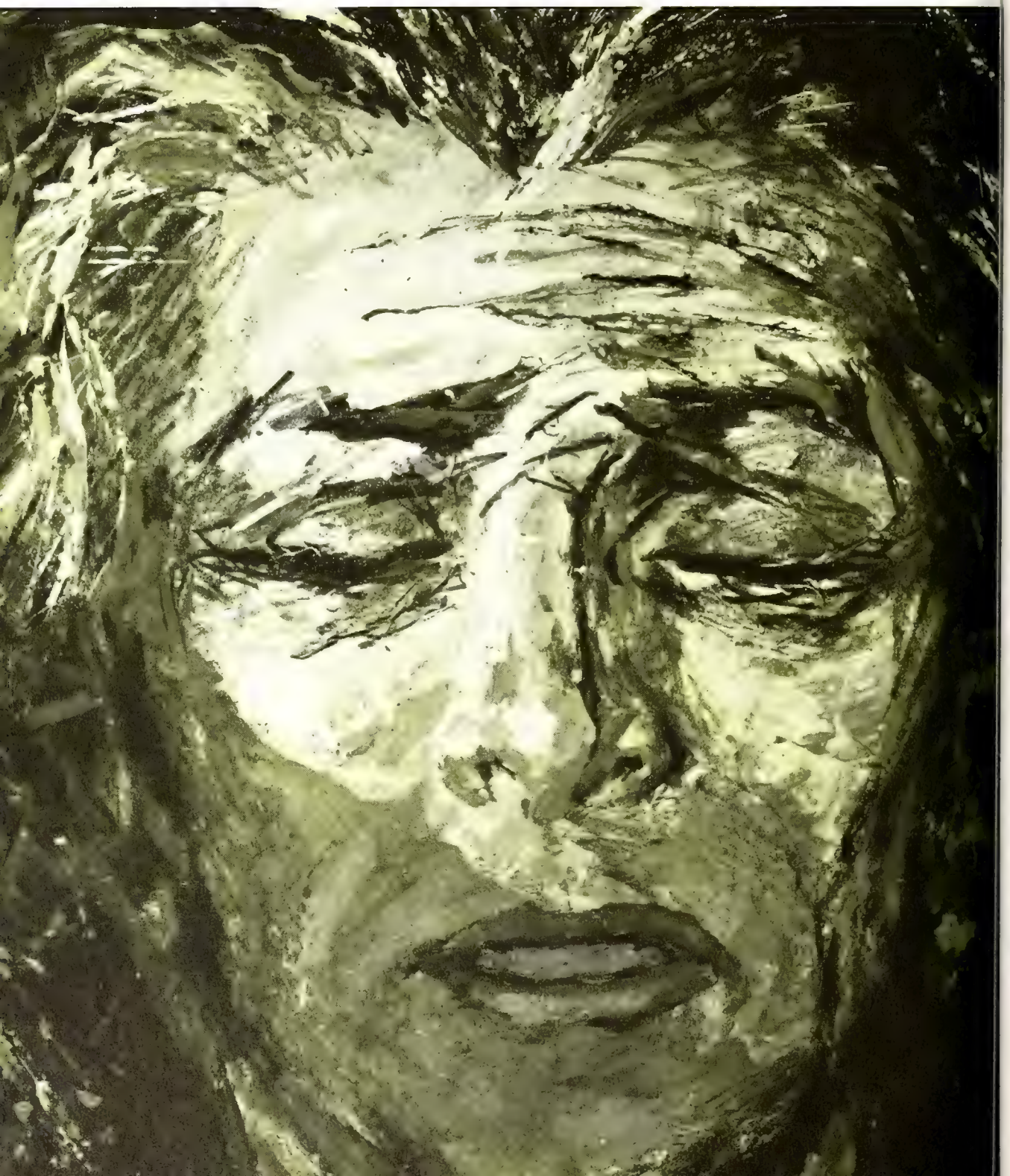
...for the tense and nervous patient

Despite the introduction in recent years of "new and different" tranquilizers, Miltown continues, quietly and steadfastly, to gain in acceptance. Meprobamate (Miltown) is prescribed by the medical profession more than any other tranquilizer in the world.

The reasons are not hard to find. Miltown is a ***known*** drug. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.***

NEW analgesic

Kills pain



stops tension

For neuralgias, dysmenorrhea, upper respiratory distress, postsurgical conditions... new compound kills pain, stops tension, reduces fever—gives more complete relief than other analgesics.

Soma Compound is an entirely new, totally different analgesic combination that contains three drugs. First, Soma: a new type of analgesic that has proved to be highly effective in relieving both pain and tension.* Second, phenacetin: a "standard" analgesic and antipyretic. Third, caffeine: a safe, mild stimulant for elevation of mood. As a result, the patient gets more complete relief than he does with other analgesics.

Soma Compound is nonnarcotic and nonaddicting. It reduces pain perception without impairing the natural defense reflexes.*

NEW NONNARCOTIC ANALGESIC

soma® Compound

Composition: Soma (carisoprodol), 200 mg.; phenacetin, 160 mg.; caffeine, 32 mg.
Dosage: 1 or 2 tablets q.i.d.
Supplied: Bottles of 50 apricot-colored, scored tablets.

NEW FOR MORE SEVERE PAIN

soma® Compound + codeine

BOOSTS THE EFFECTIVENESS OF CODEINE: Soma Compound boosts the effectiveness of codeine. Therefore, only ¼ grain of codeine phosphate is supplied to relieve the more severe pain that usually requires ½ grain.

Composition: Same as Soma Compound plus ¼ grain codeine phosphate.
Dosage: 1 or 2 tablets q.i.d.
Supplied: Bottles of 50 white, lozenge-shaped tablets; subject to Federal Narcotics Regulations.

References available on request.

WALLACE LABORATORIES • Cranbury, N. J.

Diet or Drugs?

In the long term control of serum cholesterol, dietary therapy can achieve the objective in the manner most closely approximating physiological norm.

The long term control of elevated serum cholesterol through changes in the dietary pattern of the patient puts nature's own process to work most effectively to achieve the objectives of treatment. Here are the beneficial features of dietary therapy:

Offers a solution to the related problems of obesity.

Involves little or no added expense to the patient.

May be used with complete safety.

Produces no adverse side effects.

Preferable for the long-term management of a chronic condition.

Brings about reduction of serum cholesterol through physiological processes, as yet not fully understood.

Does not usually generate new compounds in the blood, thus helping the doctor make a more accurate analysis of blood serum cholesterol.

Elevated serum cholesterol has now been linked to an imbalance in the ratio of the type of fat in the diet. Reductions in cholesterol levels have been achieved repeatedly, both in medical research and practice, through the control of total calories and through the replacement of an appreciable percentage of saturated fat by poly-unsaturated vegetable oil.

An important measure in achieving replacement is the consistent use of poly-unsaturated pure vegetable oil in food preparation in place of saturated fat.

Free Wesson recipes for delicious main dishes, desserts and salad dressings are available for your patients. Request quantity needed from The Wesson People, Dept. N, 210 Baronne St.

Poly-unsaturated Wesson is unsurpassed by any readily available brand, where a vegetable (salad) oil is medically recommended for a cholesterol depressant regimen.



Wesson is poly-unsaturated . . . never hydrogenated

More acceptable to patients. Wesson is preferred for its supreme delicacy of flavor, increasing the palatability of food without adding flavor of its own.

Uniformity you can depend on. Wesson has a poly-unsaturated content better than 50%. Only the lightest cottonseed oils of high iodine number are selected for Wesson, and no significant variations are permitted in the 22 exacting specifications required before bottling.

Economy. Wesson is consistently priced lower than the next largest seller.

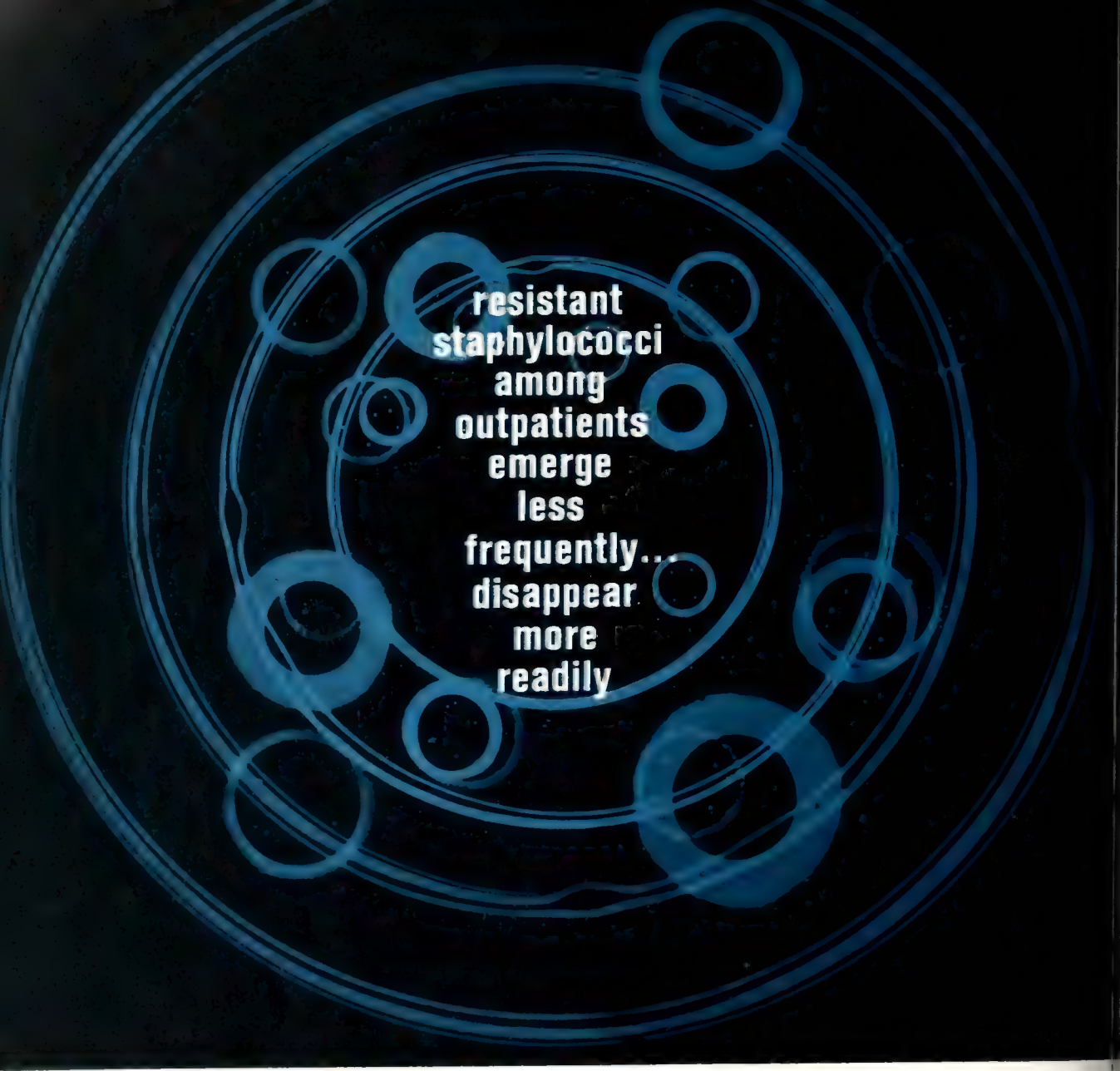
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Wesson is 100% cottonseed oil...winterized and of selected quality

Linoleic acid glycerides (poly-unsaturated)	50-55%
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Total unsaturated	70-75%
Palmitic, stearic and myristic glycerides (saturated)	25-30%
Phytosterol (Predominantly beta sitosterol)	0.3-0.5%
Total tocopherols	0.09-0.12%

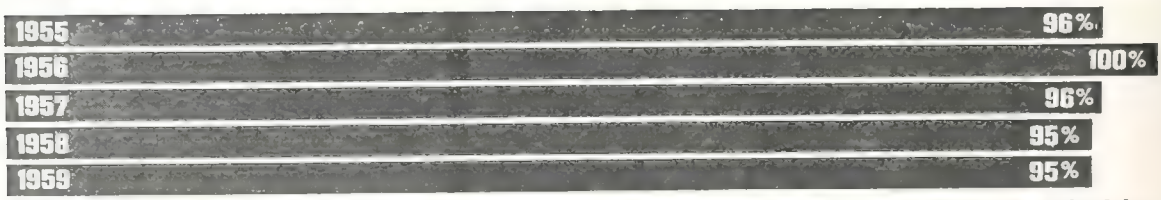
Never hydrogenated—completely salt free



CHLOROMYCETIN®

chloramphenicol, Parke-Davis

IN VITRO SENSITIVITY OF COAGULASE-POSITIVE STAPHYLOCOCCI TO CHLOROMYCETIN FROM 1955 TO 1959*



These sensitivity tests were done by the disc method on 310 strains of coagulase-positive staphylococci. Strains were isolated from patients seen in the emergency room. It should be noted that among inpatients, resistant strains were considerably more prevalent.

*Adapted from Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* **173**:475, 1960.

10360

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

PARKE-DAVIS



for the patient who is

coughing his head off

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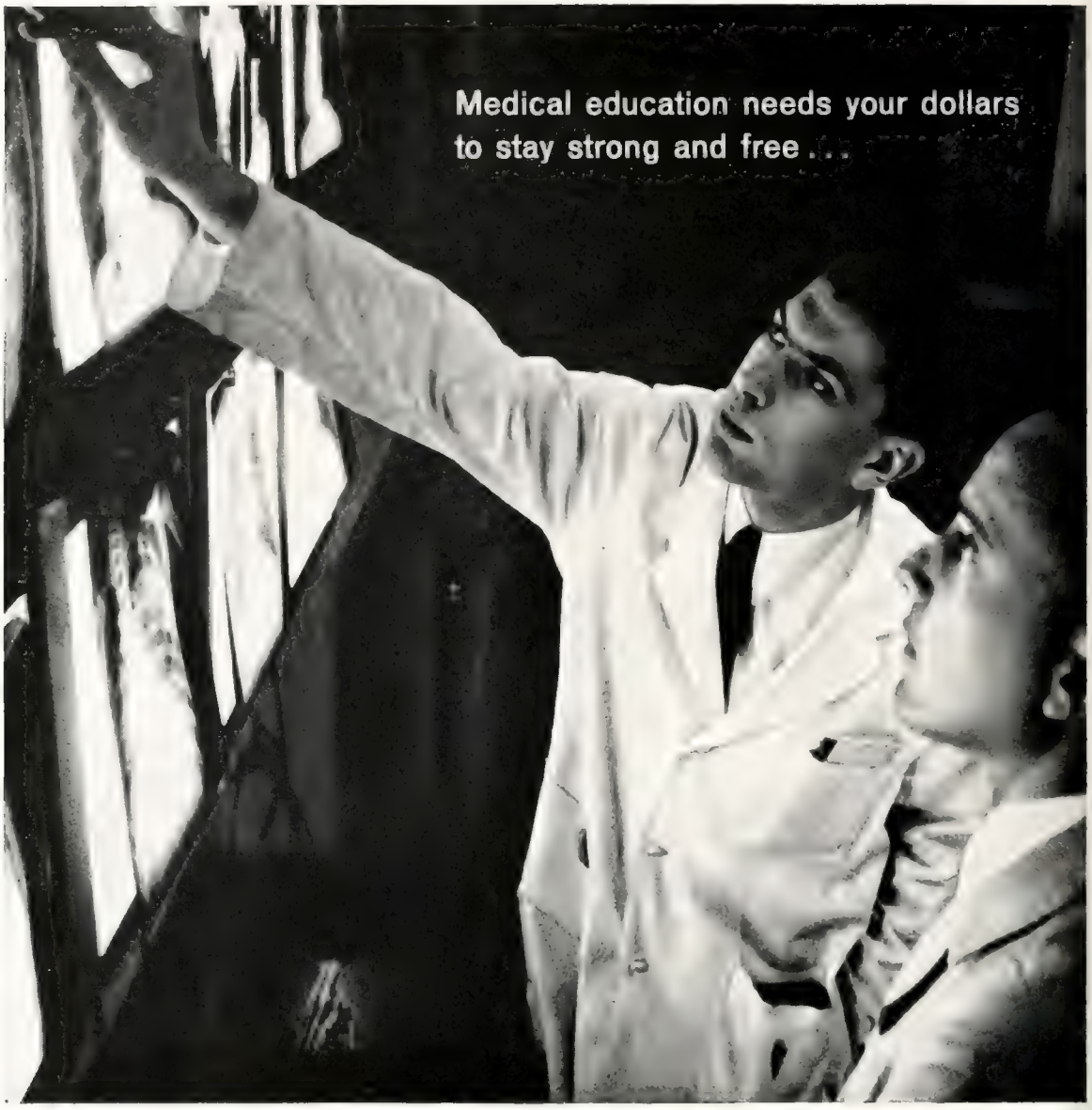
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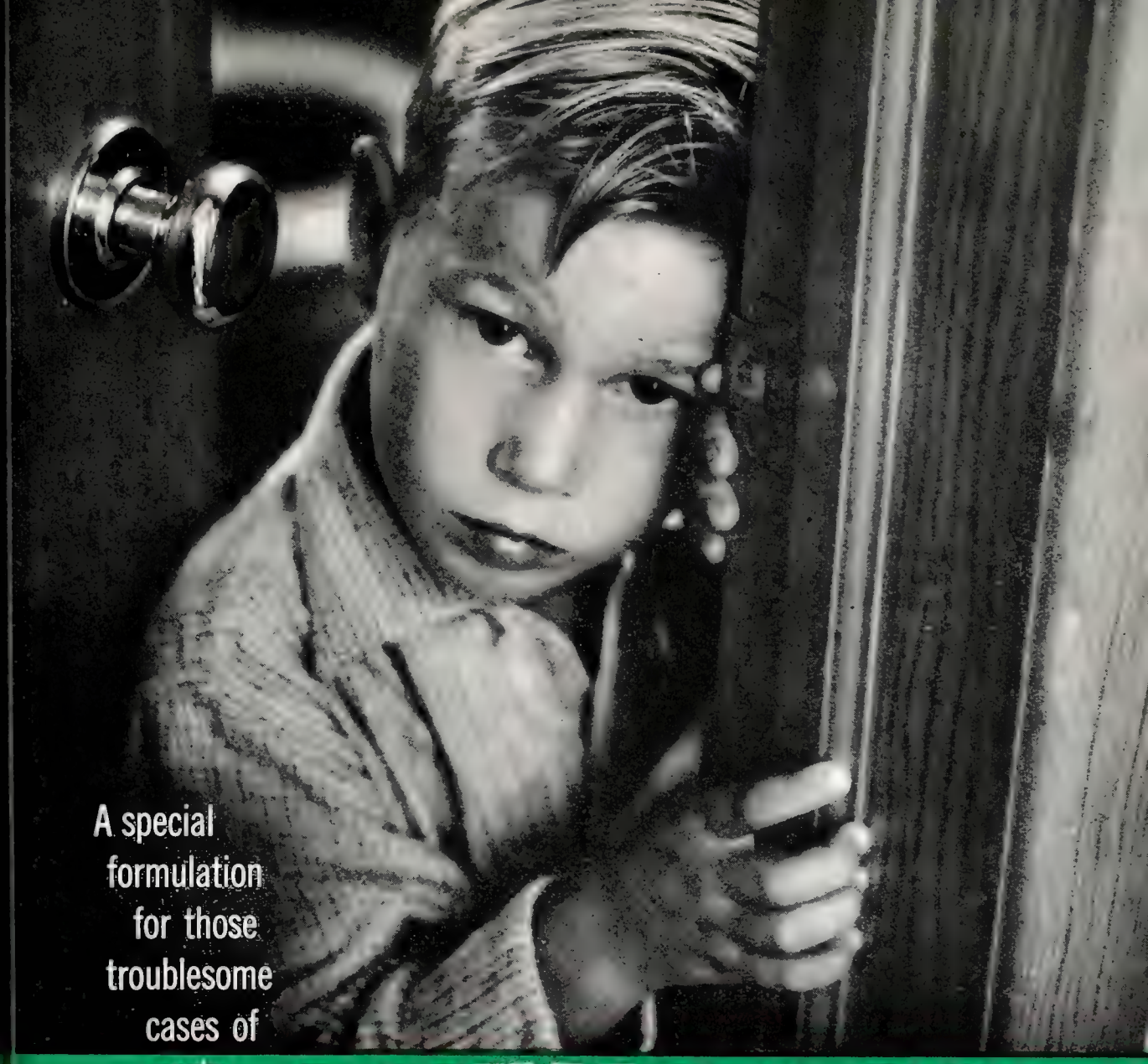
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References: 1. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 2. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 3. Gruenberg, Friedrich: *Current Therap. Res.* 2:1, Jan., 1960. 4. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 5. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 6. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 7. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 8. Collective Study, Department of Medical Research, Winthrop Laboratories. 9. Hergesheimer, L. H.: An evaluation of a muscle relaxant (Trancopal) alone and with aspirin (Trancoprin) in an industrial medical practice, to be submitted.

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Esophageal Emergencies

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CHARLOTTE

Most non-malignant esophageal emergencies lend themselves readily to satisfactory treatment if the diagnosis is promptly and correctly made. These conditions include obstructions, foreign bodies, injuries, and hemorrhage.

Obstructions

The great majority of acquired esophageal obstructions are of a chronic nature. The congenital esophageal obstructions, however, present an urgent and challenging situation. Congenital esophageal atresia, with or without tracheoesophageal fistula, if undetected invariably leads to a fatal outcome.

The diagnosis of esophageal atresia should be suspected during the first hours of life in any infant who cannot handle his saliva. There may also be strangling and cyanosis. Abdominal distention is common when a tracheoesophageal fistula is present. Normally, of course, the abdomen is flat. When an infant strangles and is unable to swallow his first feeding, esophageal atresia must be suspected immediately and the diagnosis established by roentgen examination. The passage of a small catheter through the nose into the esophagus is a helpful diagnostic test. The catheter, however, can be misleading at times by curling up in an esophageal blind pouch, making the examiner think he has passed enough of the tube to reach the stomach. The instillation of Lipiodol into the esophagus is mandatory. The blind pouch of esophagus usually ends at about the fourth thoracic vertebra (fig. 1).

The presence of air in the gastrointestinal tract confirms the presence of a tracheoesophageal fistula (fig. 2). The absence of air in the tract is suggestive, but not absolutely diagnostic, of the absence of associated tracheoesophageal fistula (fig. 1). Infants with congenital esophageal atresia usually have an associated tracheoesophageal fistula. The various anatomic combinations can be found in most any pediatric or surgical text.

Infants with esophageal atresia become dehydrated and septic from rapidly developing pneumonia (fig. 2). Aspiration of saliva and milk and regurgitation of irritating gastric juice across a tracheoesophageal fistula lead to severe pulmonary sepsis. Immediate operation is not necessarily indicated. These infants are usually premature and underweight, and several hours of preoperative management often make them better operative risks. Preoperative therapy consists of fluids given through a venous cutdown to improve hydration, penicillin and streptomycin, and frequent suction of the pharynx. Elevating the infant's head seems to decrease the amount of gastric juice which crosses a tracheoesophageal fistula. This initial medical care followed by proper corrective surgery (fig. 3) may lead to a salvage rate of 50-75 per cent.

Foreign Bodies

Foreign bodies of the esophagus are of major importance, and should always be removed promptly. Severe complications of stricture, perforation, or hemorrhage may result from leaving a foreign body in the esophagus. X-ray examination should precede endoscopy. Radio-opaque foreign bodies in the esophagus are easily detected by plain postero-anterior and lateral roentgenograms of cervical and thoracic areas

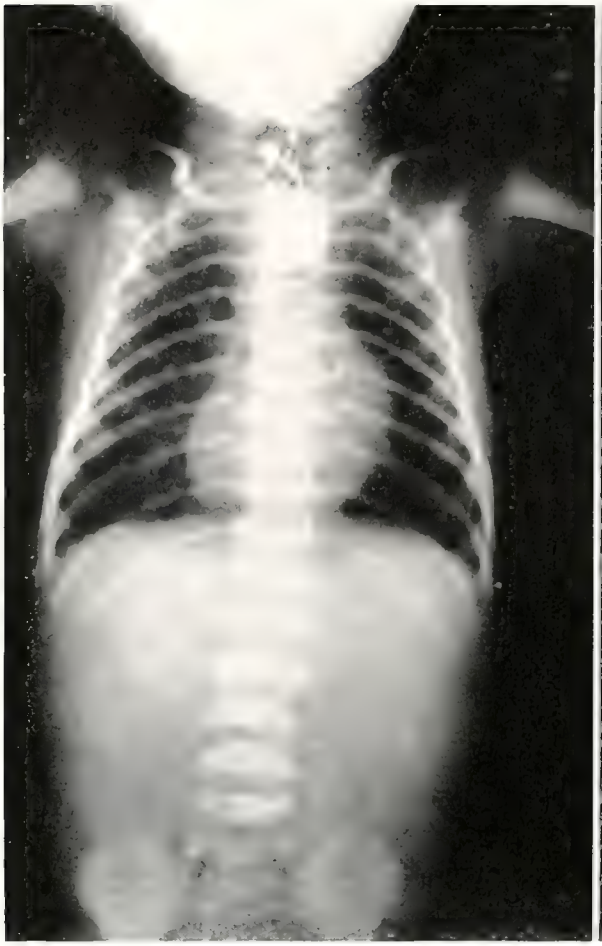




Fig. 1. (Left) Esophageal atresia without tracheo-esophageal fistula. Lipiodol instillation shows typical proximal blind pouch of esophagus. Absence of air in gastrointestinal tract confirms lack of tracheo-esophageal communication.

Fig. 2. (Right) Esophageal atresia with tracheo-esophageal fistula. Roentgenogram of the chest shows right upper pneumonia. Air in gastrointestinal tract proves the presence of a tracheo-esophageal fistula.

(fig. 4). Non-opaque foreign bodies must be visualized with contrast media (fig. 5). Failure to examine the esophagus radiographically can lead to costly oversights (figs. 6 and 7). When x-ray examination demonstrates a foreign body, immediate removal by an endoscopist is indicated. Even in the absence of roentgenographic evidence, endoscopy may still be indicated if the patient's complaints suggest the presence of a foreign body. Recurrent meat impactions at the cardia can usually be dissolved by a teaspoonful of essence of caroid.

Trauma

Perforations

Perforations of the esophagus are true emergencies, and when undetected usually lead to a fatal mediastinitis.

Spontaneous perforation of the esophagus almost always occurs during a bout of vomiting and retching—often after a drinking spree. The onset is sudden and is characterized by intense tearing pain in the substernal or epigastric areas, frequently radiating to the back or shoulders. Shock usually follows the onset of pain. Spontaneous perforation of the esophagus is often confused with acute coronary occlusion or ruptured peptic ulcer. This is a fatal mistake (figs. 9, 10, 11). A roentgenogram of the chest (fig. 8) will usually show mediastinal emphysema and pleural reaction (usually on the left side). Pneumothorax may occur. A Lipiodol swallow is extremely helpful in establishing the diagnosis. When the diagnosis is made promptly, immediate repair is done. The tear is almost invariably on the

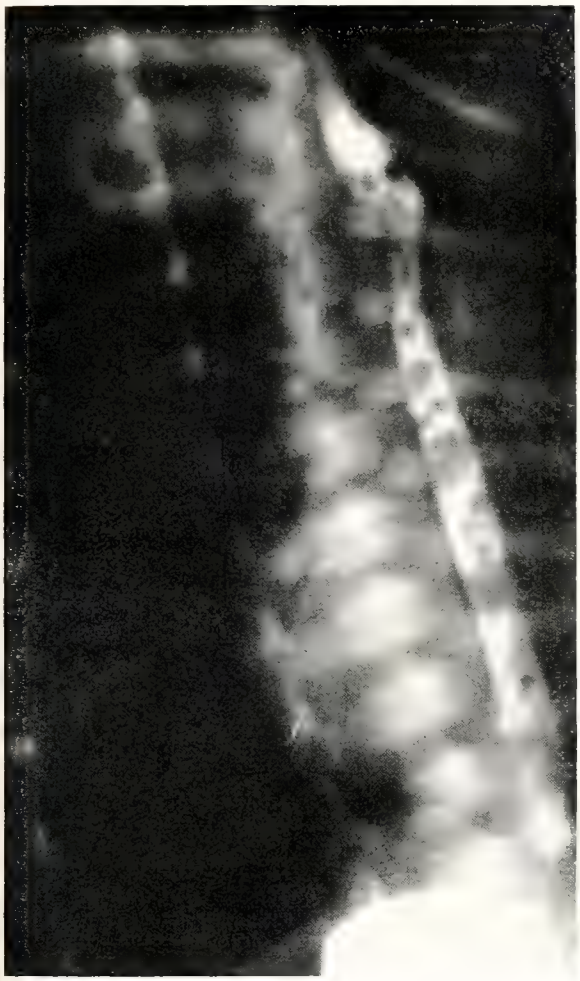


Fig. 3. Postoperative Lipiodol swallow of case in fig. 2. The tracheoesophageal fistula has been repaired and the esophagus repaired in continuity, permitting normal swallowing.

left lateral wall of the esophagus just above the cardia. Sepsis occurs early and is managed by drainage, usually drainage of the left pleural space. Intensive antibiotics and parenteral alimentation are of course continued through the acute stage. Feeding gastrostomy or jejunostomy may be required in slow-healing perforations.

Perforations by foreign bodies are occasionally seen. Sharp objects such as bones or pins are notorious offenders. The history and x-ray findings (fig. 12) will point to this diagnosis. Not only is immediate esophageal repair or drainage or both indicated, but also the offending foreign body must be removed.

Instrumental perforation of the esophagus is an infrequent but important complication which may occur during esophagoscopy, gastroscopy, or esophageal dilatation. It may even result from an anesthetist's clumsy attempt to pass an endotracheal tube. Although the complication is uncommon, it should be recognized when it occurs. The endoscopist may actually see the laceration during his examination or suspect it from the patient's discomfort. Confirmatory evidence is noted by the palpation of subcutaneous emphysema in the neck, and x-ray evidence of mediastinal or pleural air and extravasation of Lipiodol (fig. 13). When recognized immediately, instrumental lacerations should be repaired. After several hours an intense inflammatory reaction occurs, and drainage rather than repair is indicated. The usual sites of perforation are the pharyngo-esophageal junction and the lower esophagus at the cardia.

Perforations of surgical wounds are not rare and can be successfully salvaged. Leakage at the site of an esophagogastric anastomosis is a constant threat, particularly in patients emaciated from cancer. These suture breakdowns as a rule occur from the fourth to tenth postoperative day, and are suspected when sepsis or back pain become evident. Lipiodol swallow (fig. 14) will confirm the clinical diagnosis. No attempt is made to repair these surgical leaks because of the intense inflammatory reaction. Drain-

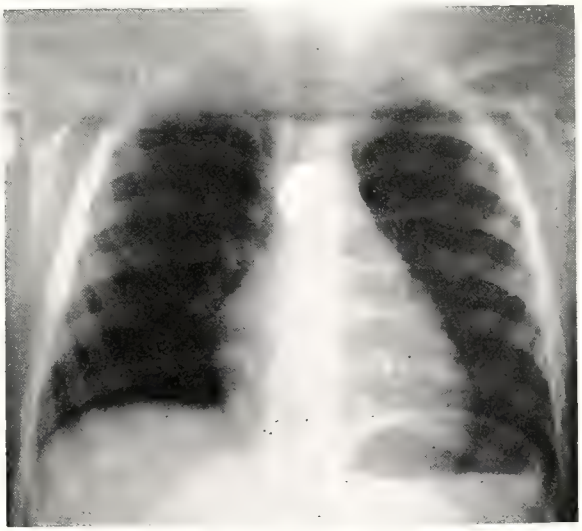


Fig. 4. Foreign body (a penny) removed by esophagoscopy. Metallic foreign bodies are easily demonstrated by plain roentgenograms without the use of contrast media.

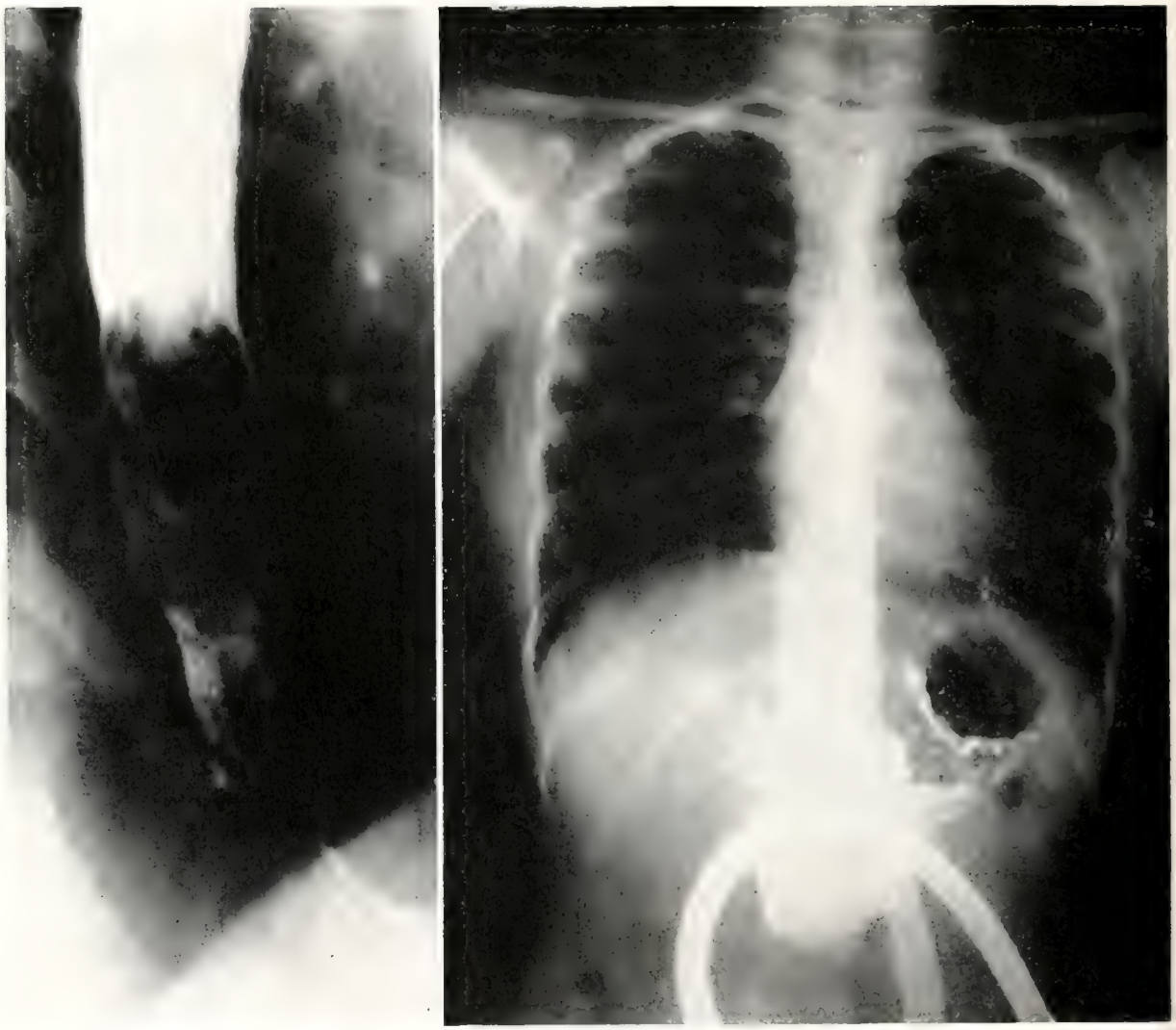


Fig. 5. (Left) Large bolus of meat impacted in lower esophagus demonstrated by barium swallow.

Fig. 6. (Right Foreign body (penny) of esophagus. This 4 year-old girl had been treated for several months by gastrostomy and retrograde dilatations for so-called esophageal stricture. A roentgenogram had never been taken. Plain chest roentgenogram shows a metallic foreign body (penny) which was removed by esophagoscopy. A roentgenogram at the onset would have resulted in prompt and easy removal of the foreign body.

age by posterior mediastinotomy or a transpleural approach is done as indicated. A feeding jejunostomy should also be done. (Gastrostomy usually leads to leakage of feeding fluid through the perforation.)

Perforation due to cancer of the esophagus is an extremely lethal complication. If the perforation is sudden, a decision must be reached as to whether immediate resection is indicated, as later resection will probably not be possible. Drainage by posterior mediastinotomy may lessen the discomfort of sepsis, but a cancerous perforation should not be expected to heal.

Perforations from penetrating objects such as bullets and knives are often overlooked. A swallow of Lipiodol should be given when any penetrating object traverses the area of the esophagus. The diagnosis can be made only when the possibility is considered. Mediastinal exploration for repair of a gunshot wound of the esophagus is a must[1]. Adequate drainage, combined with feeding gastrostomy or jejunostomy, will usually lead to excellent healing of the injured esophagus.

Chemical burns

Soda lye is the common offending agent in this distressing type of esophageal trau-

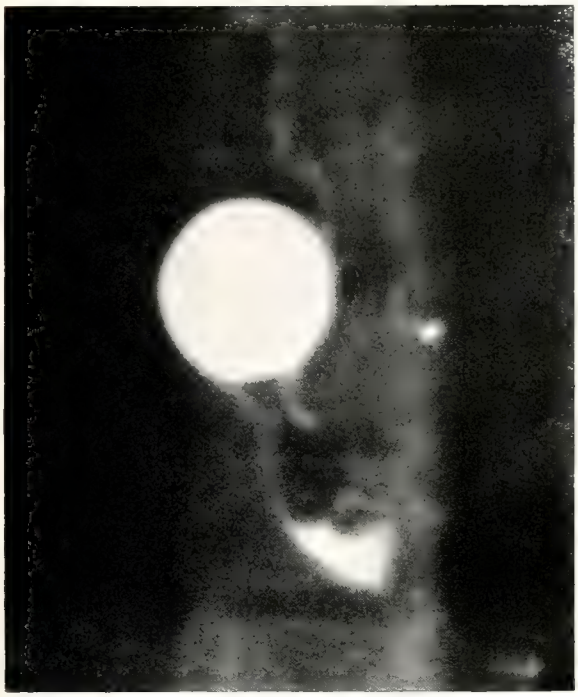


Fig. 7. Foreign body of esophagus with unnecessary delay in diagnosis. This child had dysphagia for two years before a roentgenogram was taken. The penny is easily demonstrated and Lipiodol shows beginning of stricture formation.

ma. So often the victims are small children who accidently ingest the caustic material thinking it is milk. Ingestion of lye by an adult is usually done with suicidal intent.

It is virtually impossible to neutralize ingested lye promptly enough to be effective. Mild acids such as vinegar are worth a try as immediate first aid, but results are doubtful. A patient with an acute lye burn is given nothing by mouth, except possibly a few sips of olive oil for its soothing effect. Since esophageal lye burns are complicated by secondary intramural bacterial abscesses[2], intensive antibiotic therapy is mandatory. Penicillin and streptomycin in large amounts are effective antibiotics. Since corticosteroids tend to decrease inflammatory reactions, we recommend their use. Perforation of the esophagus can occur and demands immediate drainage.

The inflamed area in the mouth and pharynx is examined daily. When the acute reaction in the throat subsides, a Lipiodol swallow is given, followed by x-ray examination. If the tissue reaction has apparently subsided, a careful esophagoscopic examination is carried out. Some of these patients

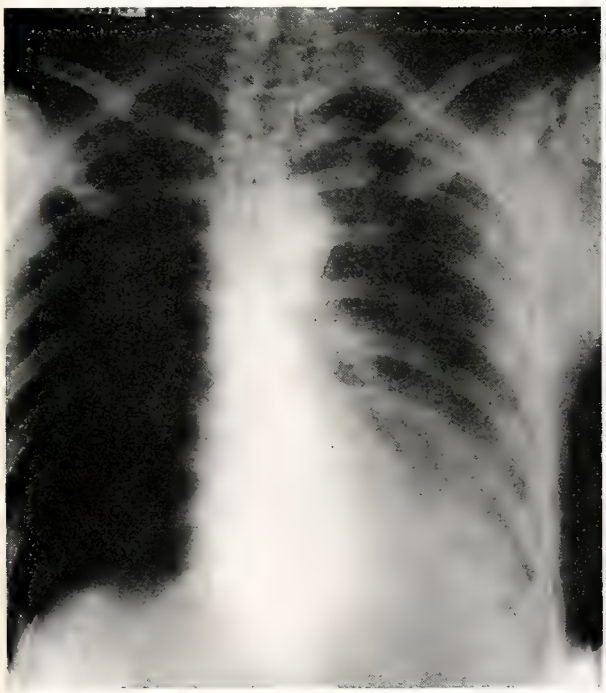




Fig. 8. (Left) Spontaneous rupture of esophagus. Early roentgenogram appearance including mediastinal emphysema and pleural effusion.

Fig. 9. (Right) Spontaneous rupture of esophagus. The diagnosis was overlooked and patient was operated upon for ruptured duodenal ulcer. The delay in diagnosis led to a fatal outcome despite drainage of the empyema.

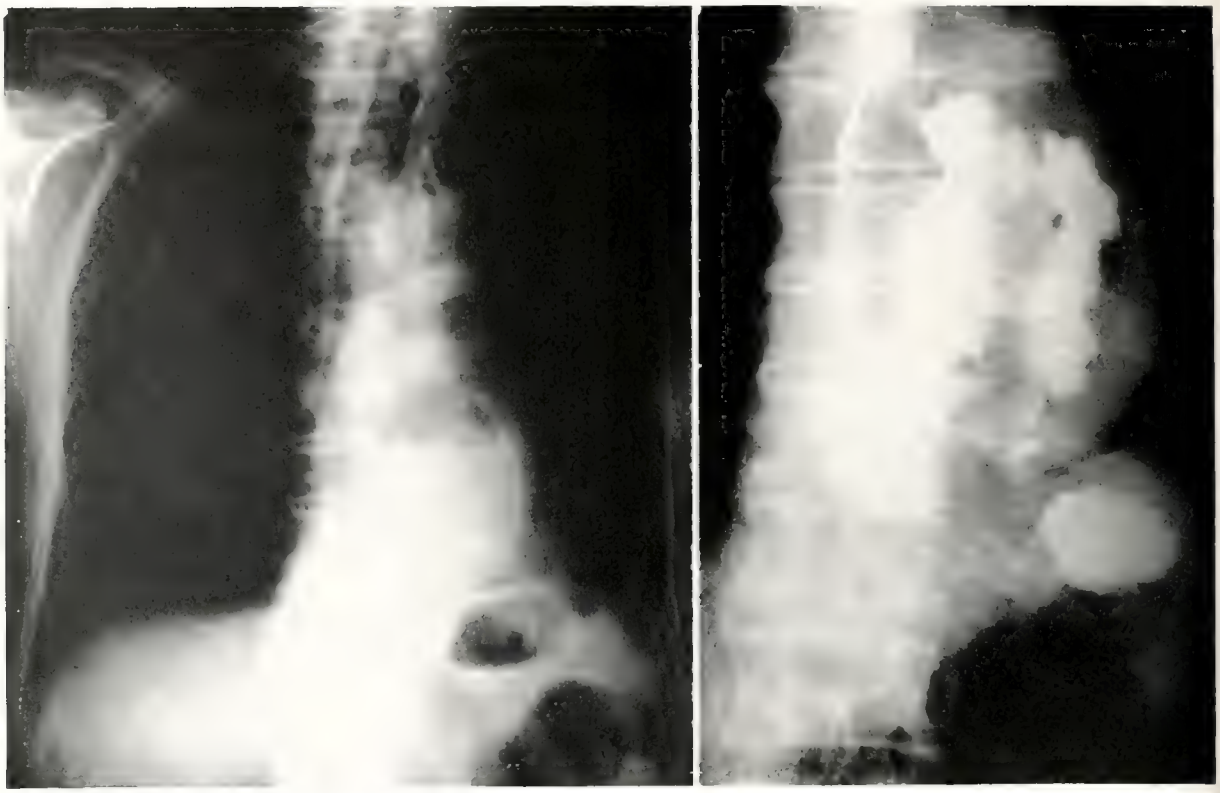


Fig. 10. (Left) Spontaneous rupture of the esophagus. The patient had sudden epigastric pain during a bout of vomiting. An incorrect diagnosis of ruptured duodenal ulcer was followed by an abdominal exploration with negative findings. The correct diagnosis was established on the twelfth postoperative day by x-ray examination. Mediastinal abscess with air-fluid level is seen on plain roentgenogram.

Fig. 11. (Right) Roentgenogram following Lipiodol swallow in same patient as seen in figure 10. Extravasation of Lipiodol into mediastinum is evident.

prove to have no esophageal burn, indicating that they expectorated the lye rather than actually swallowing it. The advocates of early dilatation always get an excellent result in such cases!

A true lye burn of the esophagus is almost always followed by some degree of stricture (fig. 15). Mild, localized stricture may be helped by a few judicial dilatations. Severe, long strictures should be corrected surgically by transplantation of the stomach or right portion of the colon (fig. 16). These major plastic procedures are naturally done after the acute inflammatory reaction has subsided. Feeding gastrostomy or jejunostomy are valuable and necessary adjuncts to the long-term management of lye burns. It should be remembered that even the acid-bearing stomach can be virtually destroyed by the corrosive action of lye. This possibility must be remembered before beginning any major reconstructive procedure (fig. 17).

Hemorrhage

Esophageal varices

Varices are most often the cause of exsanguinating esophageal bleeding. The diagnosis of these lesions can be difficult. The previous history and gastrointestinal roentgenograms are helpful. The lesions are best demonstrated by barium swallow with x-ray examination (fig. 18). Esophagoscopy in the presence of varices can be hazardous and may not demonstrate the source of bleeding. Womack[4] has suggested that bleeding from esophageal varices appears to have some arterial component, as evidenced by high oxygen saturation of blood collected from them. We have been impressed by the arterial nature of the bright red blood spurting from varices noted at operation. If these varices were produced by simple back pressure from intrahepatic venous obstruction, one would expect the spurting blood to be markedly desaturated. (Operative incisions over the neck or chest in the presence



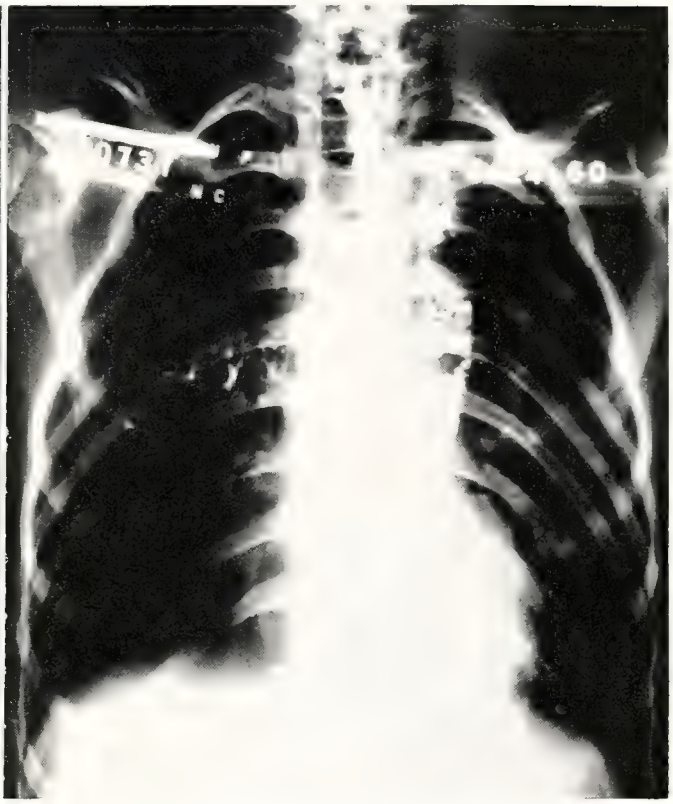


Fig. 12. (Left) Perforation of the esophagus by foreign body. Lipiodol swallow demonstrates extravasation through a perforation created by a chicken bone.

Fig. 13. (Right) Instrumental perforation of esophagus. Pain following esophagoscopy led to Lipiodol swallow, which demonstrated extravasation into the mediastinum.

of superior vena caval obstruction yield blood which is virtually black.)

We consider bleeding from esophageal varices similar to bleeding from a knife wound — that is, if it persists, operation should be undertaken before pouring 15 to 20 pints of blood into the patient. Transthoracic ligation of esophageal and gastric varices and splenectomy have proved to give very satisfactory results in our hands.

Endoesophageal balloons are often disappointing. They do not control gastric bleeders and are not without danger of causing esophageal perforation. Portacaval shunt for the treatment of acute active bleeding has not been used by us as an emergency procedure.

Esophagitis

Bleeding associated with esophagitis is usually not as severe as with varices. Esophagitis may result from hiatus hernia (particularly the "short esophagus" type) or achylasia, or it may follow plastic or resective surgery of the esophagogastric junction. Bleeding from esophagitis due to hiatal hernia will usually subside following correction of an easily reducible hernia. The short-esophagus type of hernia may require pyloroplasty, as advocated by Burford and Lischer[4] to control the esophagitis. Severe bleeding from esophagitis following esophagogastric surgery may require further resection and pyloroplasty.

Aortic aneurysms

Esophageal bleeding may come from aortic aneurysms. Arteriosclerotic, luetic, or traumatic aneurysms may erode the esophagus and cause hemorrhage. This bleeding is not always immediately fatal, and may be controlled by resection and graft of the aneurysm in selected cases. We recently saw a 7 year old patient with coarctation of the aorta who had had intermittent esophageal bleeding of two weeks' duration. Operation showed a post-coarctation aneurysm which had perforated into the esophagus. An adult patient who had previously had a local sleeve resection of a lower esophageal stricture acquired a recurrent esophageal ulcer which perforated posteriorly directly





Fig. 14. (Left) Leakage at esophagogastric anastomosis following resection for cancer of esophagus.

Fig. 15. (Right) Complete stricture of esophagus resuling from lye burn.

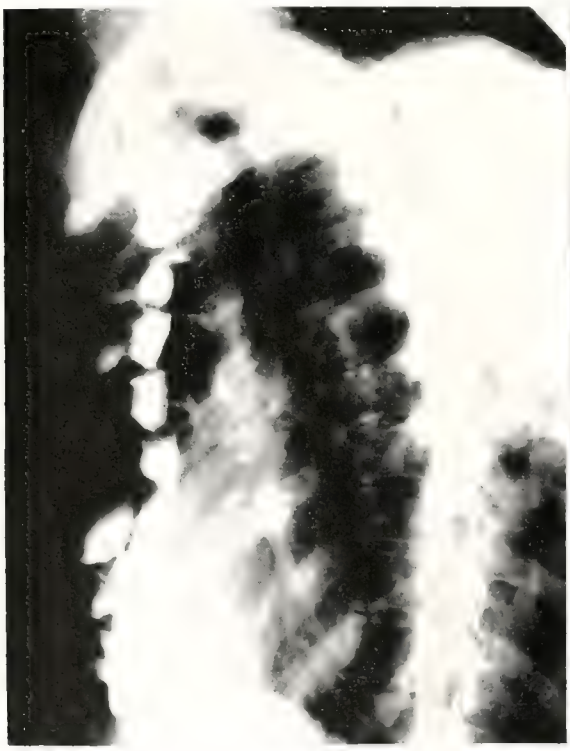




Fig. 16. (Left) Colon substitution for esophagus which had been destroyed by lye burn. The right colon lies in the anterior mediastinum and connects with the cervical esophagus above and the pylorus below. This colon substitute functions well two years postoperatively.

Fig. 17. (Right) Lye burn of stomach. The persistent napkin-ring deformity of the stomach necessitated use of colon as an esophageal substitute.



Fig. 18. Esophageal varices. Barium swallow shows typical long filling deformities created by varices.

into the aorta, leading to severe hemorrhage. The ulcer and aortic fistula were closed *in situ*, and emergency esophagogastrostomy was done.

Mucosal lacerations

Esophageal bleeding from mucosal lacerations is apparently rare. We had one patient who developed severe esophageal bleeding after swallowing a pork chop bone. Esophagoscopy demonstrated a mucosal laceration of the posterior wall of the lower esophagus. The bleeding was stopped by the application of an epinephrine-soaked sponge. Prompt healing occurred without further complication.

Summary

A number of esophageal lesions of an urgent nature are discussed. These lesions are usually readily diagnosed by history, physical examination, and in particular by x-ray findings. The use of plain roentgenograms with Lipiodol or barium swallow, supplemented when indicated by esophagoscopy, will almost invariably lead to correct diagnosis. Prompt recognition and correct treatment of these lesions lead to gratifying results.

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Every year I am told that Americans buy over the drug counters about $250,000,000 worth of vitamins. It is safe to say that at least $240,000,000 of this is wasted. No reason whatever exists for the taking of vitamins by any healthy adult American on an adequate diet. There is good reason often for correcting the diet of people who have faulty eating habits. The giving of vitamins in no sense is a substitute for a faulty diet in an otherwise normal person. Vitamin B_{12} is of no value whatever except in one group of rare diseases, the macrocytic anemias. —Forkner, C. E.: Drug Mixtures, New England J. Med. 259:439 (Aug. 28) 1958.

Outbreak of Waterborne Disease in a City School

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GOLDSBORO

The purpose of this review is to present the details of an outbreak of sewage poisoning among students at William Street Elementary School in Goldsboro. An effort will be made to point out the importance of community cooperation in such a crisis. The epidemiogic investigation is reported in a paper by Dr. Jacob Koomen, assistant director of the Division of Epidemiology of the North Carolina State Department of Carolina State Department of Health.

Report of Outbreak and Early Investigation

At 2:30 P.M. on Thursday, September 10, 1959, a local general practitioner called me at the Wayne County Health Department, stating that he had seen six children from William Street School that day, all of whom presented gastrointestinal symptoms that appeared to warrant investigation by the Health Department. We then called the principal of William Street School, who gave the following story:

At approximately 10:00 o'clock that morning students began manifesting symptoms of acute nausea and vomiting severe enough to require immediate attention. All these children were sent or taken home as they became sick. The principal had noticed that the illness apparently began in the older age group in the morning, spreading to the younger children in the afternoon.

Food and milk supply

A sanitarian from the Health Department was sent to the school to inspect the lunchroom and interview employees concerning the menus, food-handling practices, refrigeration, and dishwashing facilities of the past few days. He reported that the lunchroom and kitchen were in an excellent state of cleanliness, that all equipment was and had been operating properly, and that there was no history or evidence of illness in any of the food-handlers which might be considered as a source of the outbreak. Since there was no leftover food for bacteriologic analysis, unopened cans of food from the same lot used in preparing the previous day's luncheon were examined. Next, a thorough investigation of the milk supply, with the cooperation of the distributors and other schools obtaining milk from the same source, disclosed no contamination here.

Other factors

At this point it appeared that the usual case of food poisoning could not be proved in this instance, and that a much more thorough investigation would be required to reveal the source of the outbreak. The sanitarian's next task therefore, was to investigate environ-factors other than the lunchroom which might be responsible. Among those considered were toxic reactions to insecticides and chemical sprays used for cleaning floors, windows, and bathrooms. On his second visit to the school the sanitarian learned that on the preceding Tuesday the janitor had had to remove roots from a sewer line which had been causing a backflow in the toilets of South building.

It should be pointed out here that approximately 1,000 students attend William Street School. These pupils are located in three buildings, referred to henceforth as North, Central, and South. The lunchroom is located in a separate building, and another frame building is used for a class of retarded children. Since there was no evidence that any toxic agent had been used in any of these buildings, the only positive finding early Thursday evening was the temporary stoppage of one sewer. This fact suggested the classical story of cross connections in the plumbing of Chicago hotels, which resulted in an outbreak of amebiasis.

Community Cooperation

Early that evening, contact with other private practitioners in the community revealed that the outbreak was characterized by fevers of 103 to 104 degrees, abdominal cramps, nausea, vomiting, and diarrhea. Because the etiology was unknown, the cases were being treated symptomatically.

It was apparent from these reports that the outbreak would involve the majority of the students and some of the teachers of William Street School, and was not limited to any particular group. Because the cause had not been determined, the superintendent of city schools was advised to keep the William Street School closed the following day, Friday, September 11. This recommendation

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was followed and the announcement was made over local radio stations. Although there was general concern about the outbreak, the community remained calm as the result of frequent news releases, conversations, and close cooperation with such community leaders as the Mayor, City Manager, principals of uninvolved schools, and private physicians.

Investigation of Water Supply

Since the possibility of some cross connection or contamination in the city water supply had been suggested, the City Manager arranged to have water samples taken from the William Street School buildings Thursday night for analysis. On Friday the lunchroom was again inspected and the procedures for the week were reviewed. For a second time the findings were completely negative. Tests for residual chlorine using a Hellig Pocket Comparator, which has a range of 0.2 to 3.0 parts per million, were made at William Street School. No residual chlorine was found in the water supply there, nor at the Health Department, located approximately ¼ mile distant, nor at a residence about 1 mile distant. Immediate increase in chlorination at the City Water Plant resulted in residual chlorine at William Street School the following day.

At this time a vegetable dye was used in an effort to discover any direct cross connection which might be present in the plumbing of these buildings. We later found that this was an ineffectual method of discovering such a cross connection even if one had been present. An inspection was then made of the sewage system which had been stopped up earlier in the week. It was revealed that the sewage line lay immediately above the incoming water line for South building, and that this line had been opened at exactly the same point on the preceding Tuesday and on many previous occasions. There was, however, no indication of overflow at this site, even though a water-tight repair had not been accomplished.

By late evening Saturday, September 12, many of the water samples taken from these school buildings were showing presumptive positive results; however, since the water plant operator had recently adopted a new technique, he had some reservations as to the significance of these tests. Water samples from the three school buildings and lunchroom had also been sent the North Carolina State Laboratory of Hygiene for analysis. However, reports of these analyses were not then available.

At this point, though it appeared that we had found the source of contamination which was responsible for the present outbreak, we were not able to explain why or how the contamination of water was occurring, nor how it could affect the children in all three buildings. It was encouraging, however, that samples taken from the lunchroom were reported presumptive negative. During these days attending physicians were asked to have the patient's families submit stool specimens to the State Laboratory of Hygiene in order to isolate an organism, if possible. Dr. Koomen's epidemiologic report will show that this is a difficult task to have performed by families of patients.

Review of Food Sources

Still not satisfied that we had investigated every avenue of a foodborne infection, we interviewed each lunchroom employee at her home. These interviews disclosed that it was a standing practice in the lunchroom for employees to take home leftover food. Fear of disciplinary action prevented them from volunteering this information readily, but on being reassured each employee cooperated fully by reporting the exact foods which had been taken home during the five days prior to and including the day of the outbreak. No illness resembling the symptomatology presented by the students was reported in any of the employees or their families.

The next step was a door-to-door canvass of the homes located across the street from the school. This investigation revealed no illness similar to that experienced by the children, further strengthening the probability that the contamination was occurring within the school buildings proper rather than in the city water mains.

Assistance of National Guard

The Commander of the local National Guard unit was requested to provide the school with a temporary water supply for handwashing and drinking. The unit cooperated completely, and the temporary supply was begun on Monday, September 14, and continued until the epidemiologic investigation was completed and repairs to the school plumbing system were made. All water was cut off in North, Central, and South buildings except that necessary for operation of urinals and water closets. Since

the water samples from the lunchroom continued to show negative results, this system was left functioning.

Cooperation of State Health Department

At the request of the local Health Department, the State Board of Health assigned the following personnel to continue the investigation: Dr. Jacob Koomen, assistant Director of the Division of Epidemiology; Miss Elizabeth A. Zacha, nurse epidemiologist of the United States Public Health Service, assigned to the State Board of Health; and Mr. W. J. Stevenson, district sanitary engineer of the State Board of Health. Their investigation was most detailed and, like the earlier effort, met with the full cooperation of the city school superintendent, the principal and teachers of William Street School, the City Manager, and the superintendent of the city water system.

On Monday, September 14, it was assumed on the basis of available information that contaminated water was the cause of the epidemic. It was obvious, however, that a statistical analysis as well as an engineering survey was necessary in order to establish the source of the contamination. This phase of the epidemiologic investigation will be discussed by Dr. Koomen.

Summary

The preliminary investigation of an outbreak of waterborne disease in a city school has been reviewed. Emphasis has been placed on the necessity of cooperation between the various community agencies in the solution of such a problem. The preliminary investigation, while eliminating many possible sources of the outbreak, nevertheless did not substantiate the exact cause. Probably no community in our state is capable of completing such an epidemiologic study without the assistance of the State Board of Health. The results of their efforts will be apparent in Dr. Koomen's report.

An Outbreak of Unusual Waterborne Illness in Wayne County — Epidemiologic Aspects

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This report describes some epidemiologic aspects of an outbreak of acute gastroenteritis occurring among pupils and teachers of the William Street Elementary School, Goldsboro, shortly after the opening of the fall term in 1959. Goldsboro schools opened on Wednesday, September 2, 1959; eight days later, on September 10, an illness of 48 hours' duration, characterized by high fever (103-104 F.), abdominal cramps, nausea, vomiting and diarrhea was seen in a large number of teachers and students.

Preliminary investigation, as noted by Dr. Arthur S. Chesson, Jr., Health Director, Wayne County Health Department, pointed strongly to a common source of illness. Food was exonerated in the preliminary study and the water supply implicated as the probable common source of illness.

At the request of the local Health Director, personnel of the Division of Epidemiology, North Carolina State Board of Health, visited the Health Department and school on September 14, 1959, to aid in further investigation. At that time it was estimated that 20 to 30 per cent of the total school population of 1089 pupils had been ill.

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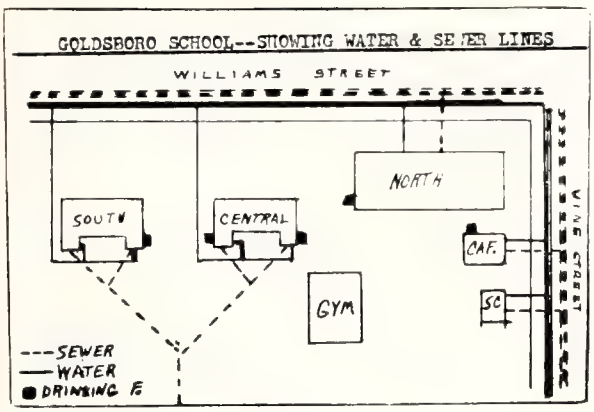


Figure 1

Materials and Methods

Six buildings are located on the school grounds as shown in figure I. Three are large classroom buildings constructed approximately 40 years ago. These buildings are called North, Central and South; North contains three classroom floors; Central and South buildings contain two classroom floors each. A gymnasium, unused at this time, is housed in a separate building. The cafeteria, a newly constructed one-story building, is also an independent structure. A sixth structure, formerly a two-story frame house, is used as a classroom building for a small group of exceptional children.

Major classroom buildings, North, Central and South, face William Street, while the cafeteria and frame building face Vine Street, the latter street forming the north border of the school grounds. The school grounds do not fill the entire city block. Homes and commercial establishments make up the south portion of the block and parts of the north and east borders as well.

Water samples for bacteriologic analysis were obtained from several sources within and outside the buildings. Outside sites consisted of the various fountains noted in figure I.

The student body consists of 1,089 white pupils distributed in grades 1 through 6. The professional staff is made up of 35 teachers and a principal; all are women. Nine persons are associated with the cafeteria. A custodian completes the personnel.

Questionnaires were distributed to each teacher requesting information relative to her own sources of drinking water, the fountains customarily used by her pupils, and the names of all students and date of onset for each child experiencing illness.

Table 1
Bacteriologic Analysis of Water Samples

Date	Location	Result	
		Presumptive*	Confirmed
9/10	South, upstairs, fountain	3/5	
	South, outside, fountain	5/5	
	Central, inside, fountain	2/5	Not done
	North, inside, fountain	2/5	
	Cafeteria, inside, tap	0/5	
9/11	South, outside, fountain	5/5	Positive
	Central, outside, fountain	2/5	Negative
	North, outside, fountain	2/5	Negative
	Cafeteria, outside, fountain	0/5	
	Cafeteria, inside, tap	0/5	

It was felt that the children were unlikely to be able to report reliably use of the drinking fountains from the opening of school. As noted above, an effort was made to obtain such data from the teaching staff in the hope that this group might be able to recall such information with some degree of correctness.

A number of patients were requested through their physicians to submit stool specimens for bacteriologic examination.

Results and Discussion

Water samples obtained on September 10, 1959 showed, as indicated in table 1, possible evidence of contamination in four of five sites selected for sampling. A sample obtained from a cafeteria building tap was negative. Each of the major classroom buildings was represented in samples taken from a fountain associated with each structure. Each as mentioned above showed evidence of possible contamination. Satisfactory confirmatory tests were not carried out, however. On the day following the outbreak, September 11, samples from five drinking fountains were obtained for study. Each classroom building and an outside cafeteria fountain tap were represented. On this date, only the specimen from the outside drinking fountain, South Building, was positive in the confirmed test. Valid comparisons cannot be made between results of bacteriologic examinations made on the two days, since confirmatory tests were not carried out on the initial specimens. Presumptive tests point to the presence of contamination of drinking water in the three major classroom buildings on September 10. Whether the negative findings of the second day of sampling reflect the increased residual chlorine level or flushing of the water system or a combination of both is a matter for speculation. The findings are presented in table 1.

Table 2
Distribution of Cases Among Students and Teachers by Date

Date	No. Cases	Percent. of Total Ill
9/8	4	0.8
9/9	33	7.1
9/10	328	70.4
9/11	86	18.5
9/12	5	1.1
9/13	6	1.3
9/14	4	0.8

Table 4
Distribution of Cases Among Pupils by Grade Level

Grade	Total No.	No. Ill	Percent. Ill
1	83	0	0
2	84	25	29.8
3	89	41	46.1
4	98	48	49.0
5	374	171	45.8
6	350	161	46.0
Special class	11	5	45.4
Total	1,089	451	41.4

Evaluation of locally available data and excavation revealed that the three major classroom buildings received water independently from a main on the near side of William Street. The cafeteria and frame building receive water from a main on Vine Street. The sewer line from North Building flows to a William Street main; sewer lines from the cafeteria and the frame building flow to a Vine Street main. Sewer lines from South and Central Buildings combine to flow in an easterly direction. As noted in Dr. Chesson's paper, it appeared that placement of sewer lines was an important factor in the conditions leading to the outbreak of illness. Subsequent events showed this premise to be untrue.

No cross connection between water and sewer were associated with any single building or among the buildings. Furthermore, cross connections in water lines between buildings were not demonstrated. Dye studies, to be discussed later, were used in an attempt to establish patterns of water flow within individual buildings.

From interviews with the school's staff, it was learned that outside play is organized for pupils at all grade levels; each classroom group is assigned a specific play area. In general, each individual classroom group uses the same water fountain. Patterns of fountain use, while fairly regular, however, are not absolutely rigid. Pupils of the exceptional class group may use various playground fountains during outside play.

Table 2 shows that 466 individuals, students, and teachers became ill with symptoms felt to be characteristic of the present outbreak. Ninety-six per cent of the cases occurred in the period September 9-11, with 70.4 per cent occurring on September 10. These data indicate the outbreak to be one of the common-source type.

In table 3, attack rates by building are computed. The attack rates in the North and South Buildings are approximately equal (44-50 per cent). A considerably lower attack rate (under 30 per cent) was found in the Central Building. This difference will be explained. Evidence obtained from questionnaires indicated that fountains associated with each large classroom building were implicated as sources of contaminated water.

Attack rates by grade, as seen in table 4, disclosed illness occurring in 45-50 per cent of those in grade 3 and above. The attack rate in grade 1 was zero and in grade 2 was 29.8 per cent. Since all first and second grade pupils are housed in the Central Building, the low attack rate associated with this building is explained. First grade teachers reported that their pupils had not yet learned to manipulate the drinking fountain levers. Also, a number of second grade students were not yet large enough to reach the fountains easily and did not drink water in school. Twenty-two upper grade students absent on September 7 or 8 did not become ill.

Differences in sex distribution of cases was not seen in the major classroom buildings, the attack rate among males and females being approximately equal. In the exceptional group of children, 2 of 7 boys, and 3 of 4 girls became ill. Differences in sex distribution are not explained. The number of children involved, however, is small.

Table 3
Attack Rate, by Building, Among Pupils and Teachers

Building	Pupils			Teachers			Total		
	Total No.	No. Ill	% Ill	Total Ill	No. Ill	% Ill	Total No.	No. Ill	% Ill
North	597	263	44.1	19	8	42.1	616	271	44.0
Central	227	53	23.3	8	4	50.0	235	57	24.3
South	254	130	51.2	8	2	25.0	262	132	50.4
Special class	11	5	45.5	1	1	100.0	12	6	50.0
Totals	1089	451	41.4	36	15	41.7	1125	466	41.4

Table 5
Relationship of Attack Rate to Water Consumption

Consumed Water			Did Not Consume Water		
No.	No. Ill	% Ill	No.	No. Ill	% Ill
22	13	59.1	14	2	14.3

As noted in table 3, 15 teachers became ill, showing an attack rate of 41.7 per cent among the professional staff of 36 (35 teachers and principal). Further questioning revealed that 22 teachers had consumed drinking water at school at sometime during the week of the outbreak. Of this number, 13 or 51.9 per cent became ill. Fourteen disclaimed drinking water at school during the week of illness. Two of this number, or 14.3 per cent, became ill. Their illness is unexplained. Table 5 presents these data.

Review of the use of drinking fountains by teachers, as presented in table 6, shows that no building—major classroom and cafeteria—can be exonerated as a possible source of the causative agent. Central Building drinking water supply was not put to test, since no teacher consumed drinking water from a source connected with this building alone. No cafeteria staff member exhibited illness, nor did the custodian.

In an effort to trace the movement of water in each of the classroom buildings, sodium fluorescein was introduced into lavatory taps in the second floor rest rooms of the South and Central Buildings, respectively. Dye ultimately appeared in the South Building's outside water fountain and in all inside ground floor fixtures of the Central Building. Unfortunately, dye indicator tests were not carried out in the North Building. It was observed, however, that flushing the ground-floor toilet fixtures caused water to disappear completely from fountains on the upper floors, indicating possible backflow when water pressure was reduced by usage. Of interest is the fact that the school custodian reported complete stoppage and overflow of second-floor commodes in South Building on September 8. Survey of the plumbing system revealed that in the past tank-type commode flushing mechanisms had been replaced with the more modern demand-type. In making the change, water lines had not been protected by installation of backflow preventers or vacuum breakers.

Water lines serving each classroom building were exposed. As indicated above, no cross connections were found. A 2-inch water line to North Building was found to be inadequate for proper service. A 4-inch line was installed. In the case of the South and Central Buildings the water lines were also found to be inadequate to provide proper water pressure at all times. Pipes at the time of the outbreak were 1½ inches in diameter; 3-inch pipes were installed to maintain proper pressures. Vacuum breakers were installed in the three buildings to assure protection of water lines.

Table 6
Relationship of Water Fountain Use to Illness Among Teachers

Fountain Used	Total	Number Ill	Not Ill
North Only	5	4	1
South Only	2	1	1
Central Only	0	0	0
Cafeteria Only	7	2	5
North and Cafeteria	4	3	1
Central and Cafeteria	2	2	0
North and Central and Cafeteria	1	1	0
North and Central	1	0	1
Totals	22	13	9

For sometime, then, a potential hazard had existed, possibly over a period of many years. Prior to the present experience, no incident of waterborne illness could be recalled. The situation which finally permitted contamination simultaneously, and apparently independently, by the mixing of drinking and discharge waters within the three major classroom buildings was not discovered. Inquiry relative to illness in the block within which the school is located did not reveal illness in other inhabitants using water supplied by the William Street main.

Bacteriologic study of 8 stool specimens submitted for study by ill patients did not show presence of pathogenic microorganisms. Millepore filter studies of the confirmed positive water sample (outside fountain, South Building) likewise did not show organisms belonging to other than the *Escherichia coli* group.

Summary and Conclusions

An outbreak of acute gastroenteritis occurring in 41.4 per cent of the pupils and teachers of a public school is described. Specific etiology of the outbreak was not determined.

The incident which brought about sufficient pressure changes within each building to permit the mixing of drinking and discharge waters was not established, but may relate to stoppage of a South Building sewer line.

Inadequate water pressure, with no protection against back siphonage was probably responsible for the mixing of drinking and discharge waters. It was not possible to determine precisely when this incident occurred, but it may have taken place on September 8.

This outbreak serves to show that despite the present low incidence of waterborne illness, health departments should be aware that such illness may still occur. Sanitation inspection of public schools should take into account the fact that outmoded systems may harbor the hazards found in this outbreak.

Cardiac Fibroma of the Interventricular Septum in a Newborn Infant

Case Report

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Primary tumors of the heart are exceedingly rare and authors of textbooks on pathology usually list them in a short paragraph, feeling that they need only to be mentioned. Encountering a large fibroma of the interventricular septum in a newborn infant is an experience that we believe should interest both the clinician and the pathologist. The purpose of the following case report is to add another to the short list of primary heart tumors recorded in medical literature.

Case Report

On August 1, 1957, a 7 pound male infant was born to a 19 year old Negro primipara. The pregnancy and labor had both been completely normal and uncomplicated. The mother's serologic test for syphilis was negative.

The infant's respiration was established immediately upon birth, at which time physical examination revealed no abnormalities. He was given the usual newborn care. Two and a half hours after birth, however, he became "choked," and was given oxygen for 20 minutes. He apparently recovered, but at the age of 12 hours he had another "spell" and was given a small dose of Coramine. The infant's condition, although not considered serious at that time, was such that feedings were not offered.

By the age of 34 hours he had become cyanotic, and was placed under continuous oxygen therapy. Physical examination was still not remarkable. The lung fields were clear, and the heart sound were considered normal. There had been no vomiting, and mucus was not excessive. At 39 hours, since he had not responded to oxygen, he was referred to the hospital for further evaluation and treatment.

On admission to the hospital the infant was cyanotic and gasping for breath. He was placed in an incubator with oxygen and his color improved somewhat, but respiration was never good. It was thought at that time that he had moderate atelectasis of the lungs, but the heart was considered normal, with no murmurs, enlargement, or arrhythmia. The remainder of the physical examination was within normal limits.

In spite of much supportive therapy the infant died three hours after admission to the hospital, at the age of 42 hours. A postmortem roentgenogram of the chest revealed marked atelectasis of both lung fields, but a normal cardiovascular shadow.

Autopsy

Autopsy was performed three hours after death. The positive findings were limited to the heart and lungs. The heart after fixation weighed 49 Gm. In the interventricular septum was a large, firm, circumscribed mass which measured approximately 4.5 by 4 cm. The tumor occupied the greater portion of the lumen of the right ventricle (fig. 1). The anterior epicardial portion of the mass had a nodular appearance, and on section the

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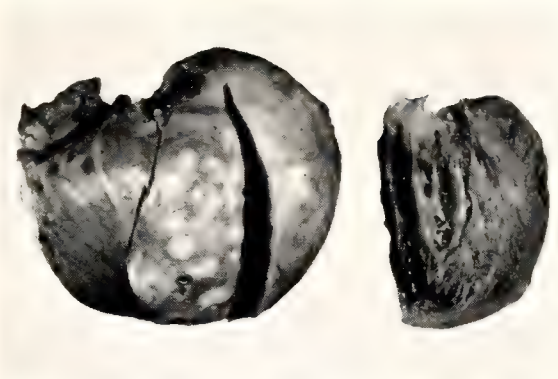


Fig. 1. Photograph of the fibroma of the heart with the tumor incised. 1 x 1.

lesion was found to be gray-white and firm. On microscopic examination the tumor was composed of interlacing bundles of connective tissue, forming a circumscribed mass (figs. 2 and 3). Focally, there were collections of lymphocytes present in the mass. In the Masson's connective tissue stains, the tumor stained as connective tissue and was sharply circumscribed from the surrounding normal cardiac muscle. No capsule was present.

Both lungs were extremely hyperemic and hemorrhagic focally.

Comment

Fibroma of the heart is a benign tumor which may arise in any portion of the myocardium or cardiac valves. In the 7 cases reviewed by Fuhmann[1], 5 originated in either the right ventricle or right auricle. One of these cases (Wagstaffe's) occurred in a 3 month old girl who died suddenly. The tumor was the size of a "chicken egg," and arose in the interventricular septum. The tumor protruded into the lumen of both ventricles. Our case is similar in that the tumor arose in the interventricular septum and extended into the ventricular cavity of the heart.

Monckeberg[3] reported a fibroma of the heart in a newborn infant that was present at the apex of the left ventricle and extended into the lumen of the chamber.

Kulka[2] reported a case of sudden death in an 8 month old child who had a fibroma in the anterior wall of the left ventricle.

Prichard[4] stated, in his review of cardiac tumors, that owing to a confusion of terms, it is difficult to state how many tumors of this type have been reported. Fibromas and hamartomas are grouped together in his study. Tumors of the same type arising from the valve cusps are also recorded.

Microscopically, these fibromas are composed of dense connective tissue. Some that have been reported in the heart also contain other tissue such as fat, nerves, blood vessels, and muscle. According to Prichard, these tumors are therefore hamartomas.

From the foregoing discussion it would appear that sudden death is a common outcome of cardiac fibromas in infants.

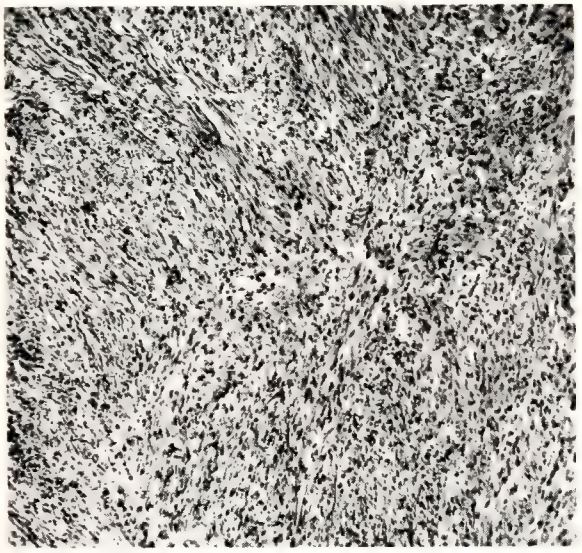


Fig. 2. Photomicrograph of the fibroma. Note the dense connective tissue of which it is composed. X 142.



Fig. 3. In this photomicrograph, the fibroma of the heart is demarcated from the surrounding cardiac muscle. X 142.

The report of this case of fibroma of the interventricular septum of the heart in a newborn infant serves to illustrate one of the rarer causes of death during the neonatal period. Although the tumor itself was not malignant, its location and size were such that the vital functions of the heart were impaired to a point incompatible with life. (Even if its presence had been suspected, it is doubtful whether surgery or any other form of therapy could have effected recovery).

Summary

The case of a newborn infant with fibroma of the interventricular septum is reported. We believe that cardiac fibromas are probably hamartomas.

It is thought that the rarity of this occurrence merits its inclusion in medical literature.

Acknowledgement

The authors wish to acknowledge referral of this case by Dr. Leroy Hand, Jr. of Gatesville, North Carolina, who delivered and cared for the child before admission to the Roanoke-Chowan Hospital, Ahoskie, North Carolina. The photographs were prepared by Mr. Ben Morton.

Addendum

Since this paper was presented to the Medical Society of the State of North Carolina, Jernstrom et al[2] have reported another case of intramural fibroma of the heart in a 3½ year old child.

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Current Trends in the Use of Monoamine Oxidase Inhibitors in Depression

ARTHUR J. PRANGE, JR., M.D.

CHAPEL HILL

The purpose of this paper is to report the results of a survey conducted in June, 1960, among the physicians of the North Carolina State Hospitals and the North Carolina Psychiatric Research, Training and Treatment Center at Chapel Hill†. The survey sought to determine the relative popularity of six commercially available monoamine oxidase inhibitors in the treatment of depression. This information was considered essential to select a monoamine oxidase inhibitor for clinical comparison with other modes of treatment of depression, my previous experience having demonstrated the importance of testing drugs that are popular among the physicians asked to use them.

One hundred thirty physicians were sent an explanatory letter and a postcard to return. Each was asked (1) to assume that he was confronted with a case of depression and had decided not to use electroshock therapy or imipramine (Tofranil, Geigy); (2) to assume that he had decided to use a monoamine oxidase inhibitor, with or without psychotherapy; (3) to indicate by a check mark which monoamine oxidase inhibitor he would select (provision was also made for the physician to check "no preference" or "would never use one"), and (4) to indicate whether in his experience he had treated with monoamine oxidase inhibitors "no cases of depression, less than 10 cases, or more than 10 cases."

Ninety-five (73 per cent) of the addressees responded. Two responses were not counted: one, because the physician's experience was based entirely on work with children, and one because three drugs were checked without an indication of preference. Eight respondents checked two drugs without indicating preference; each of these drugs was given one-half vote. The responses of the State Hospital physicians and the Chapel

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†The author gratefully acknowledges the generous response of the cooperating physicians.

Table 1
Relative Popularity of Six Monoamine Oxidase Inhibitors
(Uncorrected Values)

	No. Doctors with no MAO cases	No. Doctors with<10 MAO cases	No. Doctors with>10 MAO cases	Total No. Doctors
Catron (beta-phenylis-opropyl-hydrazine)	0	6½	7½	14
Marplan (isocarboxazide)	0	1	0	1
Marsalid (iproniazid)	0	0	0	0
Nardil (phenelzine)	1	8½	5	14½
Niamid (nialamide)	2	7	11	20
No preference	21	17	1½	39½
Would never use one	3	1	0	4
	27	41	25	93

Hill physicians differed only in that the former, taken as a group, had had somewhat more experience with these drugs. There were no consistent differences in the responses coming from the various hospitals. Therefore, all responses are considered together, as shown in table 1.

These data are somewhat more meaningful if weighted according to the experience of the respondent. Each vote based on "no cases" has been multiplied by 1; on "less than 10 cases" by 5; on "more than 10 cases" by 15. After discussion with some of the physicians involved, I have concluded that the above factors are equitable. A table with the weighted values is shown below.

Results

Several observations are immediately apparent: (1) In the uncorrected voting, "no preference" is by far the most frequent choice. (2) Niamid, Nardil and Catron then follow in popularity. (3) When the voting is corrected according to experience (table 2), Niamid is the most popular drug and Catron and Nardil follow. (4) Of the 95 respondents, none favored Marsalid and only one favored Marplan.

Table 2
Relative Popularity of Six Monoamine Oxydase Inhibitors
(Corrected Values)

Monoamine Oxidase Inhibitors	Raw Vote X 1	Raw Vote X 5	Raw Vote X 15	Total Votes (weighted for experience)
Catron (beta-phenylis-opropyl-hydrazine)	0	32½	112½	145
Marplan (isocarboxazide)	0	5	0	5
Marsalid (iproniazid)	0	0	0	0
Nardil (phenelzine)	1	42½	75	118½
Niamid (nialamide)	2	35	165	202
No preference	21	85	22½	128½
Would never use one	3	5	0	8
	27	200	375	602

Comment

Niamid is the most popular monoamine oxidase inhibitor for the treatment of depression at this time among 95 North Carolina physicians whose practices are limited to psychiatry. A number of these physicians have written and informally commented that they prefer Niamid because of its low toxicity. Marsalid and Marplan are rarely used, and several unsolicited comments about their high toxicity have been offered. One physician wrote that he had given Marsalid to 5 patients and all had developed "urinary retention." No comments were offered about the relative effectiveness of these drugs, and it appears that relative freedom from toxicity is the prime determinant in selection for use. In general, the MAO inhibitors appear to be prescribed with healthy caution.

It must be emphasized that this survey, to facilitate the selection of an MAO inhibifor a controlled study, attempted only to identify the most popular MAO inhibitor—not necessarily the "best treatment" for depressed patients. No inference should be made concerning the usefulness of MAO inhibitors, individually or as a group, compared to such treatments as psychotherapy, electroshock, or the non-MAO inhibiting drugs. There is an obvious and urgent need for reliable data concerning these questions.

The number of patients admitted to public prolonged-care mental hospitals in this country rose from 150,000 in 1950 to 219,000 in 1959. But the number of patients resident in such hospitals has decreased in the last few years, largely because medical advances have enabled many patients to be released sooner than was once possible.

The Ocular Manifestations of Congenital Toxoplasmosis in Five Out of 686 Cases of Mental Deficiency Examined in a State Institution for Mentally Retarded Children

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B.Sc., M.D., Ch.B., C.M.D., D.P.M.
CHAPEL HILL

Toxoplasmosis is an infectious disease caused by a protozoal parasite of world-wide distribution. The organism, *Toxoplasma gondii*, has been known since 1908, when it was demonstrated in the gondi, a North African rodent, by Nicolle and Manceaux and independently by Splendore in the rabbit in Brazil. Benda quotes Hellbrugge as mentioning that toxoplasma apparently had been discovered in 1900 by Iaveran, in the blood of a bird. It has since been found to be an infective agent in a great variety of species of rodents, mammals and birds from almost anywhere in the world, providing a large reservoir for human infection.

Incidence

The rat, mouse, dog, hen, cow, goat, pig, sheep, and many other animals display host susceptibility to the toxoplasma parasites, and serologic evidence indicates that the organism has been responsible for infecting between 20 and 40 per cent of the population in Britain (Beattie). The incidence of congenital toxoplasmosis in State Schools for Mental Defectives in the United States has been estimated to range from 0.2 to 0.05 per cent.

Pathology

The first cases of proved human infection were detected in newborn infants by Wolf and Cowen, in 1937. The crescent-shaped parasite is usually found in cells, where it reproduces by fission. It shows a pronounced preference for the chorioretinal structures of the eye, where it was observed by Wilder, Jacobs and others. Hogan was able to isolate the parasite from the eye in a case of congenital toxoplasmosis of 20 years' duration.

Aggregates of toxoplasma, often referred to as cysts, have been noted in sections of the brain, spinal cord, pancreas, lungs, liver, kidneys, suprarenals, gonads, myocardium, and skeletal muscles. There the parasites may long remain viable in the encysted stage, sometimes for the life of the host. The parasites are not infrequently released from the cyst walls, inducing parasitemia or localized inflammatory changes and scars in the uveal structures. This mechanism has been suggested as the means whereby recurrent attacks of human toxoplasmic chorioretinitis are produced.

By means of the cytoplasm-modifying methylene-blue dye test developed by Sabin-Feldman, the complement-fixation test and toxoplasmin skin test, it has been demonstrated that patients with uveitis yield a higher proportion of cases with immunologic evidence of toxoplasmosis than is detectable in the general population. The fact that positive findings are recorded in the normal population shows the widespread incidence of this disease.

Symptoms

Toxoplasmosis, on the whole, does little harm in the adult population except in the acquired form, which may be fatal. The human fetus, however, is particularly susceptible to the parasites, which display a remarkable affinity to the central nervous system. The disease is transmitted at about the fifth month of pregnancy to the fetus through the placental circulation from a mother who has suffered from a recent infection. The manifestations, however, are usually subclinical, and the disease is rarely recognized. Such a mother may give birth to a child with signs of hydrocephaly, mental deficiency, microcephaly, epilepsy, chorioretinitis, microphthalmia, optic atrophy, and muscle paralysis. The mother usually develops immunity to the organism and rarely, if ever, has two children with the same disease. The newborn infant may show additional evidence of active infection by such signs as hepatomegaly, splenomegaly, icterus and maculo-papular rash.

There has been much discussion about the level at which dye titers become of clinical significance. One sees, for example,

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Table 1

Case	Age	Sex	Skin Test		Dye Test	Skull Roentgenogram
			Mothers	Patients		
1	37	F	+	+	+ 1:32	Small circumscribed areas of calcification throughout
3	31	F	*	+	+ 1.128	No abnormal calcifications
2	13	F	+	+	+ 1:64	No abnormal calcifications
4	12	F	+	+	+ 1:64	No abnormal calcifications
5	58	M	+	+	+ 1:64	No abnormal calcifications

*Mother not available for skin test.

children with convulsive disorders, microcephaly or mental retardation without serologic evidence of toxoplasmosis, while all children and adults with central chorioretinitis significantly show high dye-test antibody titers, whether or not other signs of congenital toxoplasmosis are present.

It is the opinion of Fair and others that the commonest clinical form of congenital toxoplasmosis is that in which only the uveal structures are involved. A varying degree of mental deficit is usually detectable. Patients with life-long central chorioretinitis are frequently accompanied by positive skin tests and dye tests of rather low antibody titers—for example, 1:32, 1:64, and 1:128.

These are the very titers reported in visually defective and blind patients who suffer from recurrent attacks of toxoplasmic chorioretinitis unassociated with other clinical signs. Similarly, low titers were also observed in patients from whose blind eyes viable parasites were isolated (Jacobs). It is further held that the eye is capable of harboring active toxoplasmic lesions without evoking high dye-test antibody titers or that the titers, after an initial rise, quickly fall to a moderate level. Low dye-test titers are thus quite specific for ocular toxoplasmosis, and a small, active uveitis within one or both eyes may suffice to give rise to a moderate increase in serum antibodies.

Material and Method

A survey of 686 mental defectives aged 16 and younger, and of patients with a history of long-standing visual handicap, was conducted at Caswell Training School, Kinston, North Carolina in April, 1958. The team was composed of a consultant ophthalmologist and the writer, using the skin toxoplasmin test, dye-test, and ophthalmoscopic techniques. Signs of the congenital form of toxoplasmosis with pronounced chorioretinal manifestations were detected in 5 mental defectives, 4 female and 1 male.

Low dye-test titers and positive skin tests were obtained (table 1), and all patients had a history of defective vision of varying degree; 2 patients had convulsive disorders of the major type and one showed intracranial calcifications of the diffuse, small, circumscribed kind.

The 5 cases of congenital toxoplasmosis represent 0.7 per cent of the 686 patients investigated and 0.25 per cent of the total enrolment of 1,930 patients resident at Caswell Training School.

Case Reports

Case 1

The patient, a 37 year old white woman, gave a history of grossly defective vision in both eyes. She was the fourth of nine siblings, five living and four dead. She had epilepsy of the major type. Her father, an alcoholic, died of tuberculosis at the age of 33. Her mother was still living, and in good health. The parents were second cousins.

The patient had a record of backwardness at school. Results of psychometric tests (Stanford-Binet) were as follows: January 26, 1928—chronologic age 6-11; mental age, 3-4; intelligence quotient, 48; October 22, 1934—C.A., 13-8; M.A. 6-8; I.Q. 49; March 5, 1953—C.A. 32, M.A. 7-2, I.Q. 48.

Fundoscopic examination disclosed tremendous bilateral chorioretinal scars in each macula. In the right fundus was a large healed scar, strongly pigmented. There was bilateral horizontal nystagmus and internal strabismus involving the right eye.

X-ray examination of the skull disclosed "small circumscribed areas of calcification throughout the cerebral structures."

Reactions to skin tests (toxoplasmin) were strongly positive in the patient and positive in the mother. A dye test drawn in April, 1958, was positive in a dilution of 1:32.

Diagnosis: A confirmed case of congenital toxoplasmosis in a mid-grade mentally defective female, with major epilepsy.

Case 2

The patient, a 13 year old white girl, was a mental defective of the familial type. Her gait was awkward, and she had a history of defective vision. The youngest of three siblings, she weighed 5½ pounds at birth.

Her mother was a high-grade mental defective, and both maternal grandparents were also defective. While imprisoned for murder, the grandfather died of cardiac disease at the age of 73. The maternal grandmother had poor general health.

Results of psychologic testing were as follows: Stanford-Binet; February 8, 1958—C.A. 12-8, M.A. 3-10, I.Q. 34. Bellevue-Wechsler Scale for children: full scale I. Q. 33.

Fundoscopic examination revealed bilateral heavily pigmented chorioretinal scars. The anterior segment of each eye was clear. The left eye showed an external squint. Roentgenograms of the skull were essentially negative.

Reactions to toxoplasmin skin tests were strongly positive in the patient, positive in the mother. A dye test drawn April, 1958, was positive in a 1:64 dilution.

Diagnosis: A confirmed case of congenital toxoplasmosis in a mid-grade mentally defective female of the familial type.

Case 3

The patient was a 31 year old white woman. She had been born at term, after an uneventful labor, and weighed 6 pounds at birth. For the first three months she had had prolonged fits of crying. She commenced teething at 1 year and walking, with some difficulty, at 3 years of age. She has never talked. Her right eye was removed prior to her admission to Caswell Training School on December 9, 1949. At the time of writing she is almost blind, stunted in growth, poorly proportioned, and microcephalic (cranial circumference 16¾ inches). Her older brother is normal. Parental history is not available.

Examination of the left fundus showed large central chorioretinitis. Microphthalmia was noted in the left eye. The right eye had been surgically removed. X-ray films of the skull were essentially negative. Reaction to a toxoplasmin skin test was positive. The mother was not available for testing. The dye test drawn April 1, 1958, was positive in a dilution of 1:128.

Diagnosis: A confirmed case of congenital toxoplasmosis in a low-grade microcephalic mental defective female, associated with microphthalmia in the left eye and almost complete blindness.

Case 4

The patient, a 12 year old white girl, was the second of seven siblings. She began walking at the age of 18 months and talking at 2 years. She had had the following childhood diseases: whooping cough, chicken pox, measles, and mumps. She had a record of major epileptic seizures since early childhood.

Results of a psychometric test done on December 21, 1953 were: C.A. 7-7, M.A. 3-10, I.Q. 51. The report added that the "patient shows extremely poor visual perception which cannot be improved with glasses."

Fundoscopic examination showed inactive central chorioretinitis in both eyes. Each nerve head was quite pale, but the vitreous body was clear. She also had an alternating internal squint. Skull films were essentially negative.

Skin tests done on both patient and mother were positive. A dye test drawn April 1, 1958, was positive in a 1:64 dilution.

Diagnosis: A confirmed case of toxoplasmosis in a high-grade defective female, associated with major epilepsy.

Case 5

The patient, a 58 year old white man, was considered mentally defective by his family, but no detailed information regarding his development was available, except that he began walking at 2 years 3 months. He often expressed paranoid ideas, and on several occasions threatened suicide. Once he caught the colored maid by the throat, threatening to kill her. His condition gradually deteriorated, and he became temperamentally unstable and unmanageable. He is said to have set fire to a barn when he was an adolescent.

His father had had severe diabetes. The mother, who is still living, was in good health and mentally normal; a maternal aunt, however, had major epileptic seizures.

Psychometric tests done July 20, 1945, were reported as C.A. 44-11, M.A. 2-6, I.Q. 20 (on the Kuhlmann Infant Scale). The psychologist added that "the patient belongs to the group of persons generally referred to as pseudo-mentally retarded, in view of his long history of delusions and hallucinations which are superimposed on a background of mental retardation. In April, 1953, the patient's test scores were C.A. 52-7, M.A. 4-1, I.Q. 26. The improvement in the score over that obtained in 1945 apparently indicates a lessening of the intensity of the psychogenic disorder (pfropfschizophrenia)."

Fundoscopic examination of the right eye showed advanced cortical and nuclear cataract with no sign of old inflammation externally. "The left lens was clear. A few small floating exudates were noted in the vitreous humor and there was a large central chorioretinal scar."

The patient's reaction to a toxoplasmin skin test was strongly positive; the mother's positive. A dye test drawn April 1, 1958, was positive in a 1:64 dilution.

Diagnosis: A confirmed case of congenital toxoplasmosis in a mid-grade mentally defective male, with superimposed schizophrenia psychosis described as pfropfschizophrenia.

Conclusion

Congenital toxoplasmosis is an important etiologic factor in the production of central, bilateral chorioretinal lesions, and often the only clinical sign seen of the disease; it is also a prenatal agency in the

causation of mental deficiency of varying degrees and of developmental anomalies.

It may be added that a mother, having borne one affected infant, acquires such a degree of active immunity to toxoplasmosis that there is little risk of her bearing a second child similarly affected. If we had a reliable method of combating toxoplasma infection without hindering antibody-formation, one could recommend the active immunization of all toxoplasmin negative pregnant women as a routine measure of arresting congenital toxoplasmosis.

The author wishes to express his appreciation to Dr. J. R. Fair, M.D., Chief, Ophthalmology Division, Department of Surgery, Eugene Talmadge Memorial Hospital, Medical College of Georgia, Augusta, Georgia, for his ophthalmoscopic examinations, serologic studies and advice, and also to Nurse Rose M. Jordan for her valuable co-operation and planning of Table 1.

Medical Treatment of Glaucoma

ALAN DAVIDSON, M.D.
NEW BERN

Glaucoma is a disease that is difficult for the patient to accept and difficult for the physician to diagnose and manage.

It presents the following problems to the patient:

It commonly has no early symptoms. Vision may be almost lost before the disease is recognized.

It is a test of the patient's faith in his physician, because frequently the diagnosis has to be accepted in the absence of subjective symptoms.

It confronts the patient with a lifetime of inconvenient medication; of repeated, expensive, tedious eye examinations, and often operations.

It requires an intelligent, cooperative patient—a "miotic personality"—for satisfactory medical treatment.

It holds over the patient the ever-present threat of having to go through life with gunbarrel vision, or no vision at all.

Glaucoma is difficult from the physician's point of view (1) because of the lack of symptoms to aid in early detection; (2) because of the necessity of an absolutely accurate diagnosis between the angle-closure and the open-angle types—a feat that at times is virtually impossible; (3) because of the lack of a single, simple clinical test which will accurately follow the course of the disease; (4) because of the necessity of estimating the patient's intelligence and cooperation before setting out on a medical regimen; (5) because there is no way of knowing exactly how much pressure a given optic nerve will stand; (6) because of the life-long nature of the disease; (7) and because there are no hard and fast rules for the medical or surgical treatment. The regimen of treatment must be tailored to fit the individual case.

In summary, the patient and the physician are faced with a disease-process the main feature of which is a slow but inexorable decrease in the outflow facility of the eye and a rise in the eye's intraocular pressure, causing damage to the optic nerve with resulting loss of visual field and visual acuity.

This is the problem. What can be done about it?

My specific subject is the medical treatment of glaucoma. This automatically eliminates most cases of the angle-closure type, of which at least 95 per cent are surgical. The only medical therapy is that needed to lower the tension in an acute attack to a level where it is safe to operate. In my experience this has not been a difficult problem since the introduction of Diamox. Intravenous Diamox, together with intensive miotic therapy, will usually blunt the edge of an attack. If this combination fails, a retrobulbar injection of Xylocaine and epinephrine will complete the job. To date, I have not needed intravenous hypertonic urea, although glowing reports of its effectiveness have been made.

Read before the Section on Ophthalmology and Otolaryngology, Medical Society of the State of North Carolina, Asheville, May 10, 1960.

Diagnosis

The first step in the medical treatment of glaucoma is early recognition. This is a problem for the entire medical profession, especially those engaged in doing the bulk of routine physical examinations. It is the duty of ophthalmologists to teach medical students, interns, residents, and their colleagues in practice how to use the tonometer and to use it routinely in physical examinations.

Once increased intraocular pressure has been detected, the next step is the differential diagnosis. Is it angle-closure or open-angle glaucoma? If it is the angle closure, the treatment is surgical. If it is open angle, the control is primarily medical.

The differential diagnosis depends upon skill and experience in using the gonioprism and the slit-lamp. With the slit lamp it is possible to get some idea as to whether the anterior chamber is roomy or shallow. The gonioprism will show exactly what is going on at the chamber angle—that is, if you know how to use it. I must confess that I am not confident of my interpretation of what the gonioprism shows, even after struggling with it for 10 years. It is an art that requires constant practice, and a skill based on knowledge of the appearance of the chamber angle in normal, young adults. Proficiency is aided by the frequent examination of normal young eyes. I favor the Allen, Zeiss, or Goldman apparatus. It is a simple matter to slip on one of these prisms after completing a routine examination or treatment at the slit-lamp, such as a contact lens check-up or the removal of a corneal foreign body.

Evaluation

Once the differential diagnosis of open angle glaucoma has been made you are ready to make a glaucoma survey of *both* eyes of the patient. By this I mean:

1. A careful, accurate examination of the central field using standard techniques and lighting, with a large (3 to 5 mm.) white test object.
2. Ophthalmoscopic examination with particular attention to the optic disc, the macular area, and the lens. In open angle glaucoma, especially with intravenous Diamox available, you should dilate the pupils once a year. Remember, a normal disc can withstand pressure much better than a cupped disc.
3. Schiotz tonometry done at various hours of the day to map out the pattern of diurnal variation of the intraocular pressure in each individual case.
4. Tonography if available.
5. Gonioscopy.
6. Visual acuity.

It is upon this composite of tests that one's clinical judgment is based. However, there are pitfalls to avoid in interpreting them.

The visual field can be constricted by miosis or cataract formation rather than by glaucoma.

Glaucomatous scotomata can be enlarged by lens opacities.

Visual acuity can be reduced by cataract, macular degeneration, or branch occlusion of the central retinal artery rather than glaucoma.

Cataract formation can make the optic disc appear more pink than it actually is, and early optic atrophy can be missed.

The tonometer may be dirty or out of calibration. Have at least two good tonometers available.

An isolated measurement of the intraocular pressure can be very misleading. Take the tension at various hours of the day and night. You may be looking at too many abnormal glaucomatous anterior chamber angles with the gonioscope. For comparison study some young adult eyes.

This glaucoma survey should be done completely, if possible, every 12 months. Examination of the fields, ophthalmoscopic examination, and tension and visual acuity tests can be done as often as indicated, depending upon the course of the individual case. To handle any volume of glaucoma cases, standardized techniques, careful organization of glaucoma practice, and precise office records are obvious and mandatory.

Treatment

The principles underlying the medical treatment of open-angle glaucoma are: the use of a drug or combination of drugs which will reduce the intraocular pressure throughout the entire 24 hours of the day to a level where no damage to the optic nerve will occur. This might be 12 or 30 Schiotz units depending on the individual eye. This reduction should be accomplished by a min-

imal amount of the drug—as much as necessary, as little as possible. The applications should be properly timed to take into account the fluctuations in intraocular pressure during the entire day. The medication should be adjusted to the patient's daily living and emotional status. Without clinical control, no drug should be prescribed in a case of open-angle glaucoma.

The aim of medical treatment is to maintain the introcular pressure of the eye at a safe level all day long so that no optic nerve disease will develop, or if it is already present, will not progress. This is accomplished in the following manner:

Administer a 1 per cent solution of pilocarpine three times daily. Pilocarpine is the smoothest pressure-reducing drug. It causes less disturbance to the patient's accommodative mechanism than does any other miotic. Patients develop tolerance and sensitivity to it less frequently. If this dosage fails to control the intraocular pressure (1) increase the concentration of pilocarpine and the frequency of dosage; (2) add 0.25 per cent eserine ointment at bedtime; (3) add 2 per cent epinephrine bitartrate three times daily; (4) switch to a more effective miotic; (5) add Diamox given by mouth, but only if the patient is too old for surgery, or in order to keep the intraocular pressure under control until an operation can be done, or to keep the tension at a safe level after partially successful surgery; (6) surgery. Then if the operation is not completely successful start the cycle all over again.

The aqueous secretory suppressants—Diamox, Daranide, Neptazane, and Cardrase—have been wonderful aids in treating glaucoma. In prescribing one of them it is wise to outline for the patient the various side effects to be expected. I usually start out with Diamox, and in the occasional case where severe side effects occur, switch to one of the others. There appears to be little to choose between them so far as therapeutic effectiveness is concerned.

In glaucoma that is not controlled by other miotics, one of the newer agents should be tried before resorting to surgery. Echothiopate iodide (Phospholine) and demecarium bromide (Humorsol) will bring under control many cases of open-angle glaucoma uncontrolled by other miotics. My personal experience is limited to Humorsol. I have seen no sensitivity reactions to its use. Large pseudocysts of the iris which materially interfered with vision developed in 1 patient, and the drug had to be discontinued. It is effective in reducing the intraocular pressure, and requires only two applications daily.

Miotics can cause not only an artificial myopia but also a definite disturbance of the adaptation of the eye to dark. This can virtually disable the patient and make some activities, such as driving, dangerous. It should be kept in mind when prescribing miotics.

Another phenomenon to remember in prescribing miotics is tolerance. Tolerance can be distinguished from a change in the severity of the glaucoma by stopping all medication for three or four days and then reevaluating the diurnal variation in intraocular pressure. Tolerance is less apt to occur if a low concentration of a drug is used initially.

Conclusion

In this short paper it is obviously impossible to touch on more than a few high spots in the medical treatment of glaucoma. One of the most difficult problems is knowing when to stop medical treatment and operate. Light on this subject can be found elsewhere.

Report from The Duke University Poison Control Center

J. M. ARENA, M.D. *Director*

ARSENIC POISONING

A 16 month old Negro infant was admitted to the Children's Ward of the Duke Medical Center, August 13, 1960, because of a generalized convulsion and severe vomiting. A spinal fluid examination done elsewhere was negative. Because of the continuous vomiting the parents were questioned about toxic agents and the grandmother confirmed the fact that the infant had mouthed two or more bottle caps filled with Terro-Ant Killer (0.91 per cent metallic arsenic). He was started on BAL, and after a stormy course he is making a good recovery.

Comment

Arsenic is used in insecticides, ant poisons, weed killers, wallpaper, paint, ceramics, and glass. The action of acids on metals in the presence of arsenic forms ar-

sine gas, the arsenical analogue of ammonia, a fantastically toxic gas—30 parts per million by inhalation can give rise to symptoms. Arsenic presumably causes toxicity by combining with sulfhydryl (-Sh) enzymes and interfering with cellular oxidative processes. In this respect arsenic behaves rather like the heavy metal, although chemically it is more ambiguous, lying somewhere between phosphorus and antimony, and in most respects is not metallic at all. Its soluble compounds are readily absorbed via the skin and mucous membranes and only slowly eliminated, so that repeated doses are cumulative. The fatal dose of arsenic trioxide is 120 mg. (2 grains). The allowable food residue is limited by federal law to 0.65 mg. (1/100 grain) per pound.

The symptomatology depends entirely on the amount ingested or inhaled. When massive amounts of arsenic are ingested, the initial symptoms are violent gastroenteritis, vomiting and copious watery or bloody diarrhea, and burning esophageal pain. Later the skin becomes cold and clammy. There is generalized weakness, and the blood pressure falls. Convulsions and coma are the terminal signs, and death results from circulatory failure. If death is not immediate, jaundice, oliguria, or annuria appear after one to three days. Inhalation of arsenic dusts may cause lassitude, dyspnea, cyanosis, cough with foamy sputum, and pulmonary edema.

The general measures in the treatment of arsenic poisoning are to keep the patient recumbent and warm and to hospitalize him as soon as possible. Every effort should be made to remove arsenic from the stomach by copious lavage, using warm water and milk (as a demulcent), followed by a saline cathartic. If the patient is seen immediately after ingesting the poison, the oral administration of a mixture of 30 ml. of tincture of ferric chloride and 30 Gm. of sodium carbonate in 120 ml. of water is an effective antidote. Care should be taken, however, to remove the resulting precipitate as completely as possible by gastric lavage. Intensive hydration should be instituted in order to maintain fluid balance and to prevent or treat shock.

The specific treatment is dimercaprol (BAL) utilized as a general antidote to sulfhydryl injury by arsenic and heavy metals. The dosage is 2.5 to 5 mg. per kilogram of body weight by intramuscular injection every four to six hours for two days and then twice daily for the next 10 days or until recovery is complete. Children can be treated in the same fashion, for they tolerate BAL as well as do adults. At intervals it is well to test the urine, stools, and blood to gauge how rapidly arsenic is being eliminated and how effective the course of treatment is.

Arsine

Arsine is an extremely poisonous, colorless, inflammable gas. It can be evolved whenever ores contaminated with arsenic come in contact either with hydrogen ions from the action of acid on metal, or with aluminum used as a finely divided wetted dross (which probably evolves hydrogen by electrolysis or hydrolysis). Most cases of arsine poisoning are found in the metallurgic industries.

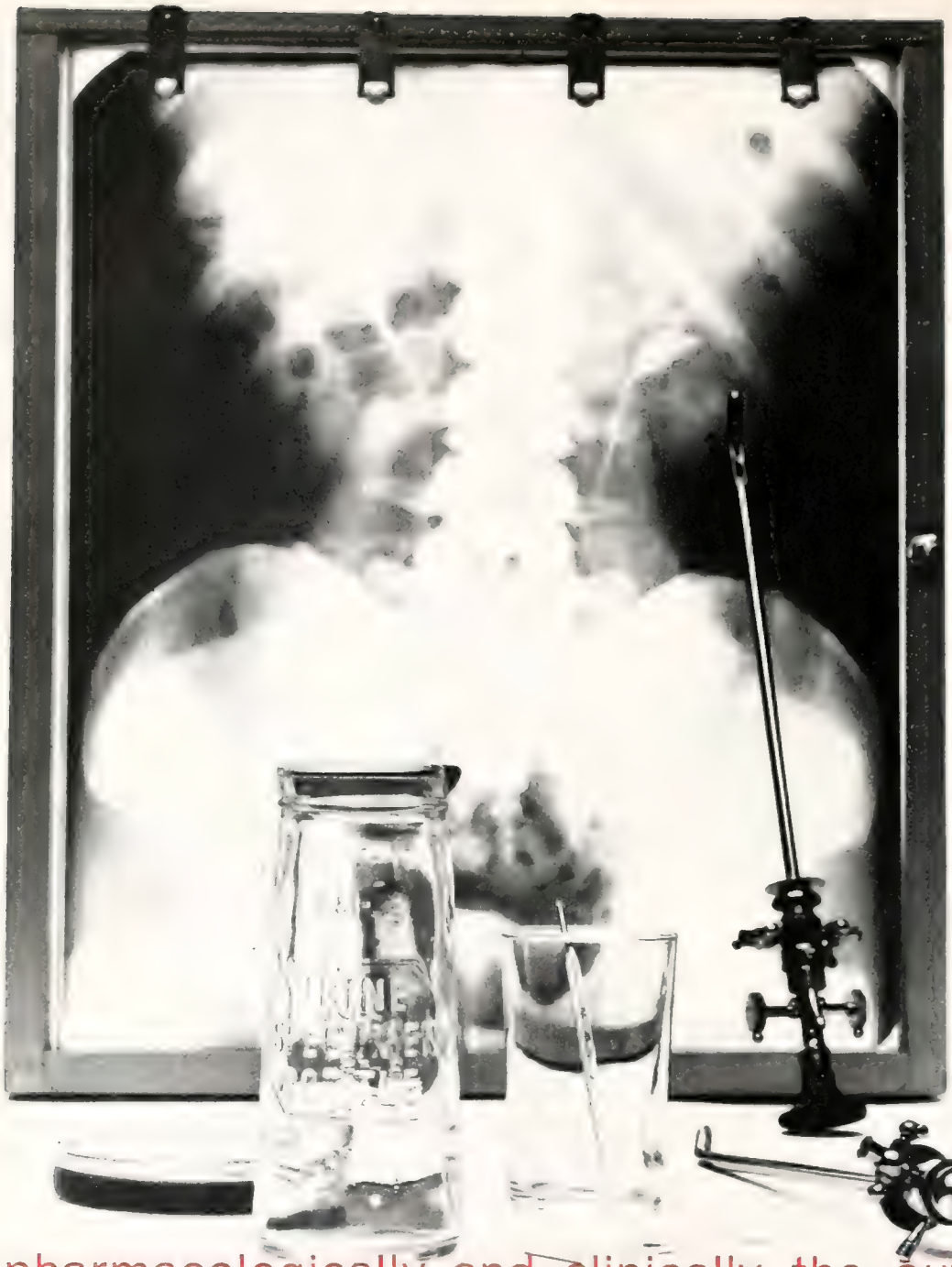
The symptoms are (1) nausea, vomiting, abdominal cramps; (2) hemolysis, hemoglobinuria and jaundice; (3) oliguria, anuria, and uremia due to blocking of renal tubules by products of the breakdown of hemoglobin.

The toxic effects can generally be explained by the destruction of red blood cells, but damage to the liver, spleen, kidneys, lungs, and so forth, is also direct and severe. Electrocardiographic changes are felt to be of importance in the diagnosis of cases of even minimal exposure.

Immediate measures are required if the hemolytic and toxic effects of arsine gas are to be overcome. Patients receiving sublethal amount of the arsine will recover without apparent sequelae. Those receiving a lethal dose are doomed at a very early hour. Exchange transfusion has been advocated. Dimercaprol, although ineffective, should be used.

The true solution of the problem lies in prevention: adequate ventilation, education, efficient warning devices—these are essential in any industry where arsine gas is a possibility. The odor cannot be relied upon for detection of the gas.


The miracle behind miracles is that
in nature there is no surrender.
PURPOSE...
In the path of any purposeful effort, there are obstacles that must be expected and overcome. For example, Blue Shield and the doctors who support it have not been without their share of problems in planning a program for care of the aged. Yet there has been no thought of giving up, for much has already been accomplished. As one doctor sums it up: "Blue Shield Plans already cover people over 65 in the same proportion as they exist in the population at large – and membership is growing at a faster rate in this age group!"
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1. Boger, W. P.; Strickland, C. S., and Gylfe, J. M.: Antibiotic Med. & Clin. Ther. 3:378, (Nov.) 1956. 2. Boger, W. P.: Antibiotics Annual 1958-1959, New York, Medical Encyclopedia, Inc., 1959, p. 48. 3. Sheth, U. K.; Kulkarni, B. S., and Kamath, P. G.: Antibiotic Med. & Clin. Ther. 5:604 (Oct.) 1958. 4. Vinnicombe, J.: Ibid. 5:474 (July) 1958. 5. Anderson, P. C., and Wissinger, H. A.: U. S. Armed Forces M. J. 10:1051 (Sept.) 1959. 6. Roepke, R. R.; Maren, T. H., and Mayer, E.: Ann. New York Acad. Sc. 60:457 (Oct.) 1957.

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			Annual Premium	Semi-Annual Premium	Annual Premium	Semi-Annual Premium
5,000	5,000 to 10,000	50.00 Weekly	$ 78.00	$ 39.50	$104.00	$ 52.50
5,000	7,500 to 15,000	75.00 Weekly	114.00	57.50	152.00	76.50
5,000	10,000 to 20,000	100.00 Weekly	150.00	75.50	200.00	100.50
5,000	12,500 to 25,000	125.00 Weekly	186.00	93.50	248.00	124.50
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DECEMBER, 1960

POST-ELECTION REFLECTIONS

Regardless of his politics, almost everyone must have a feeling of relief that the most strenuous presidential campaign this country has ever seen is over. Now that the tumult and the shouting have ended, we may draw some conclusions in the light of the cold gray dawn of the morning after.

There seems to be universal agreement that the campaign was entirely too long. There is much to be said for the British custom of allowing only three weeks for a campaign. Certainly, four to six weeks should be long enough for this country. After the first month, virtually no new arguments were advanced and each candidate went over the same ground *ad nauseam*. They both must have been completely exhausted physically after almost four months of strenuous exertion.

Neither candidate should have been allowed to expose himself to the actual dangers that they both incurred in their desperate efforts to cover every state in the Union.

It is probably fortunate for the country that the margin of victory was the narrowest since Wilson won over Charles E. Hughes in 1912. The closeness of the vote indicated that the people are more conservative than was the Democratic Political Platform Committee. Certainly, Kennedy has no mandate to launch a lavish spending spree.

It is futile but interesting to consider the many if's involved in the campaign. James Reston devoted a whole column to the if's. For example, if the make-up man had not put too much powder on Nixon's face in the first T.V. debate; if there had been no T.V. debate at all; if Kennedy had not telephoned Martin Luther King's wife, etc., etc. One comment often made is that it is doubtful if a majority of either party really wanted either candidate, but that the choice was predetermined by the politicians.

For the first time a Catholic was elected president. It is futile to debate whether Kennedy was elected because of his religion or in spite of it. At any rate, the question of a candidate's religion will probably never be considered seriously in the future.

There is virtually universal agreement among editors and political commentators that our Electoral College system is as archaic as a muzzle-loading cannon. Certainly, it is not in keeping with our so-called democratic form of government for a bare majority in a state to give a candidate 45 electoral votes. It remains to be seen whether sentiment will become strong enough to banish this archaic system.

A final comment is that in spite of the vigorous campaign waged by both men, it was a remarkably clean fight. Some commentator said that both Harry Truman and Lyndon B. Johnson had criticized Kennedy much more harshly than did Nixon—and that Republicans had criticized Nixon far more than did Kennedy.

Kennedy has made an auspicious beginning by asking for a conference with Nixon and with other leaders of the Republican Party preparatory to making the transition as smoothly as possible. This attitude on his part should leave little encouragement for Khrushchev, Castro, and company.

A final thought is that conservative Southern Democrats and Mid-west Republi-

cans—re-enforced by some Republican gains in Congress—will help to keep the ship of state on a relatively even keel.

* * *

MORE ABOUT MEDICAL RESEARCH

The editorial on medical research in the October issue of the NORTH CAROLINA MEDICAL JOURNAL provoked a record number of comments. Space will not permit publishing all the letters of protest, but one from each medical school is to be found in the Correspondence Department. Although only those of protest are published, it is only fair to say that there has been enough favorable reaction to balance the scale almost evenly.

It is significant that all the letters of criticism have been from members of the Heart Association. Since cardiovascular disease is the leading cause of death, this editor is quite willing to concede that it should be given priority over all others. Certainly in terms of need, the Heart Association has a far more valid claim to public support than have the organizations for combating polio, cystic fibrosis, and any number of rare and unusual diseases that are now soliciting funds.

The October editorial was not intended to discourage giving to such really deserving causes as the Heart Association. It was meant as a protest against the multitude of fund-raising organizations operated for considerable profit by their paid employees, using all kinds of tear-jerking schemes to raise money for their own salaries as well as for research. These organizations are often in competition with one another and all of them are in competition with the United Fund.

Dr. Hal Green's statement that medical education and research "are not competing interests but mutually dependent ones," and that "one cannot be retarded without hurting the other" is open to debate. In recent times, many competent authorities have deplored the tendency to belittle teaching and patient-care at the expense of research. For example in the chairman's address, Section on Gastroenterology, delivered at the One Hundred Ninth Annual Meeting of the American Medical Association, Dr. Joseph B. Kirsner, said: "The current glamour of 'basic research' notwithstanding, there also must be renewed attention to the patient as a person. There is a definite danger, with the present emphasis upon research and the apparent de-emphasis of professional skills and teaching ability, that instruction in clincial medicine will deteriorate."

The conclusion of the whole matter was expressed by a member of the Heart Association in a personal letter: "I certainly agree with you that the numerous fund raising organizations for the rare and unusual diseases are placing unnecessary and undesirable demands on our citizens. I think the medical profession must take a lead in somehow controlling the number of campaigns. I have thought a lot about this but cannot come up with an idea as to how we can limit or restrict the appeals for medical purposes. Certainly the multiple drives are harming the research efforts and the standing of the medical profession."

Let us hope that someone will come up with the proper idea about limiting and directing appeals for medical purposes.

* * *

MEDICAL CARE FOR OLDER PEOPLE

As our readers well know, the Forand Bill and the recent presidential campaign have made the medical care of our older citizens a major topic of discussion. In *Harper's Magazine*'s October supplement, "The Crisis in American Medicine," one question asked in the foreword was, "How did both political parties become convinced that the government will have to do something about the rising costs of medical care for old people?"

The obvious answer is, of course, that there are 16 million voters aged 65 years or more. The politicians, who do not consider whether a majority of the older citizens themselves want or need government aid, should profit by a study directed by Professor James Wiggins and Helmut Schoeck, of Emory University's Department of Sociology and Anthropology, and reported last August to the Fifth Congress of the International Gerontology Association. Both the *Rhode Island Journal of Medicine* for October and *GP* for November tell of this study. The Emory University group, in extended personal interviews with 1500 noninstitutional persons aged 65 or older, found that more than 90 per cent of these elderly people could think of no unmet personal medical needs; 64 per cent had voluntary medical insurance; and only 10 per cent believed that health insurance should be compulsory.

Maybe our older citizens are not as gullible as the left-wing politicians think.

THE HARPER'S SUPPLEMENT

Doubtless most of our readers have seen or heard of the special Supplement, "The Crisis in American Medicine," published in the October issue of *Harper's Magazine*. It is hardly a coincidence that the National Collegiate Debate topic for 1960-61 is: "Resolved, That the United States should adopt a program of compulsory health insurance for all citizens." While the last six articles discuss subjects that concern thoughtful medical men, the Foreword and the first two articles furnish ammunition for the affirmative of the query.

Editor R. H. Kampmeier's editorial in the October issue of the *Journal of the Tennessee Medical Association* is so good that much of it is quoted below, with permission and with a hearty Amen!

* * *

"It is with portions of the Foreword, and the two first articles *The Politics of Medicine* and *The Decline of the Healing Art* that your Editor wishes to take exception. The authors have done both the ill of this country and the public at large a great disservice through a vicious emphasis on half truths and uncommon practices, a misinterpretation of facts, as well as superficial analyses because of either gross ignorance or perfidious innuendo.

"It is amazing to what an extent even a 'free' press may reach the effect of a controlled press. The 'herd' reaction of the writers of the press on the socio-economic facets of today's medicine is one of the phenomena of present-day writing. Generally, politicians, and writers for the public, conspire by this mass hysteria to lay all of the difficult problems of modern medical care upon the heads of the medical profession alone.

"Through the creation of an image of the doctor as a dishonest, superficial, out-dated, social climbing, money-grabbing charlatan, the press is doing the people of this country a grave disservice.

". . . The present attitude of the press may well influence the shortage of physicians it laments and blames on 'the most powerful trade association, (A.M.A.) in the world,' in its alleged efforts to control the output of physicians so fees may be kept up. (The ludicrousness of this viewpoint is apparent to every medical educator who deplores the dearth of qualified applicants for admission to medical schools at the moment.) Over the years and as a member of an admissions committee your editor has interviewed many applicants to medical schools . . . My well formulated opinion based on this experience is that scientific curiosity is the basic drive in choosing medicine as a career . . . If scientific curiosity is the motivation for a medical career, one can readily see why the 'cream of the crop' is by-passing medicine for electronics, 'rocketeering,' radioactive science and chemical engineering. With such stimuli why should a bright boy choose a medical career to be branded later as dishonest, superficial and money-mad? It were far better to get into electronics, take out a few patents and drive a Cadillac without criticism."

* * *

THE NORTH CAROLINA MEDICAL JOURNAL CHANGES PRINTERS

This issue concludes Volume 21 of the NORTH CAROLINA MEDICAL JOURNAL. It also marks the end of the association from the beginning with the present printing establishment. For the first seven years of this JOURNAL's life, the firm was known as the Penry Aitchison Company. Until his death in September, 1948, the late Harry Aitchison was "guide, philosopher and friend" to the editor and his daughter assistant[1]. A year after his death the firm's name was changed to the Carmichael Printing Company—for the senior partner in the firm, Mr. Robert Carmichael. He too has taken a personal interest in the JOURNAL over the years.

From time to time, as a good business man should, our Business Manager, Jim Barnes, has asked for competitive bids for publication of the JOURNAL. This year the Graphic Press of Raleigh made the winning bid; so the January issue will bear the imprint of that firm. It has a good reputation and this editorial office looks forward to a pleasant association with them. It is but natural, however, to bid farewell to our long-time friends, the Carmichael Printing Company, with a feeling of sadness.

For both the Carmichael Printing Company and the Graphic Press the best of everything for the coming year.

1. Editorial: Harry Aitchison, North Carolina M. J. 6:451 (Oct.) 1945.

President's Message

A MID-YEAR REPORT

By now the first half of my term of stewardship of your State Medical Society is past. It is in order to bring you up to date, briefly and concisely, on problems of major importance and what progress has been and is being made toward solving them. As a preamble, however, I would like to give a personal observation.

The Presidency of your State Medical Society should no longer be considered as a reward for services rendered in the past. The business of any state medical society has so grown in basic importance, complexity, and volume as to require a major portion of the time, thought and effort of an interested and intelligent person, if his presidential duties are to be discharged to the credit and benefit of the Society. I hope I am measuring up to the demands of this exacting job. Thus far, more than one third of my productive working time has been spent in this effort. Barring conflicts, I have attended every major district or county meeting to which I have been invited or of which I received notification. I hereby request the privilege of attending all major meetings held before my tenure of office expires in May, 1961. My experiences, thus far, have been mostly pleasant and rewarding and I am thoroughly enjoying the opportunities and contacts which the presidency is affording me.

When given the gavel of office this past May, I promised to meet existing problems head on, to seek out areas of detrimental complacency and propose remedial action, and also to strive for greater excellency in the functions and achievements of our Society. This, I believe, is being done.

Already the programming of our 1961 Annual Scientific Assembly is virtually complete. In the pages of this JOURNAL you will soon receive advance information about the May Assembly in Asheville which is calculated to revitalize your interest and determination to attend. Long before May 8 you will receive a new type of program which will contain advance information about the content of the scientific papers and biographic information about the speakers.

The decision to abandon the afternoon specialty section meetings produced much discussion and discontent. This resultant discontent and wide discussion have, I believe, served a good purpose. Renewed and revitalized interest evidenced in specialty section meetings has led to the decision by the Committee on Scientific Works to continue these meetings on Monday and Tuesday afternoons for another year. It is hoped that increased attendance and participation in these sessions will justify their continuation. Both this Committee and I sincerely hope, however, that attendance at specialty section meetings will be secondary to attendance at the entire State Society program, including sessions of the House of Delegates, where we all shall meet as medical doctors with a common interest in a common cause—the survival of private enterprise medicine.

In September the Executive Council approved the progress made by the Ad Hoc Committee established by the House of Delegates empowered to organize a corporation subsidiary to the Medical Society to operate in the prepaid medical insurance field under the National Blue Shield emblem. Much progress has been made towards the completion of this project so that it may be presented to the House of Delegates in an immediately workable form next May. It is extremely important that all delegates be factually well informed about it, and that they come to Asheville with an open mind and the desire to enter into intelligent discussions leading towards a proper resolution of the problem. Further progress will be reported as it is made.

Currently, the problem of integrating Negro Physicians into the Medical Society of the State of North Carolina is about in *status quo*. Mecklenburg County has apparently clarified its position so as to conform with the Constitution and By-laws of our Society. This was evidenced by documents recently submitted by local Society officials. The several Negro applicants in Guilford County failed to reapply for membership when offered application forms requiring that they indicate, by their own initiative, the type of membership which they desired. In an indirect manner your society was notified recently that the Old North State

Medical Society (Negro) had reactivated its committee charged with the solution of the integration problem. Perhaps this is a good omen. I intend to make contact with the Old North State Society with the purpose of renewing discussions in this area. Certainly there will be developments to report before our annual session in May.

The biggest problem which we presently face as a group is the position of physicians in the implementation of the recent legislation dealing with medical care of the 65 years and older age group. On Sunday, November 13, the combined committees of this Society on Chronic Illness and Advisory to the Board of Public Welfare held a rather long and informative meeting in Raleigh, with Dr. Ellen Winston, State Commissioner of Public Welfare, and portions of her staff. Out of the ensuing discussions came four major problem areas requiring decisions. (1) Shall we as physicians ask for and receive vendor payments for services rendered under this bill as implemented? (Discussed at length on president's page November issue of this Journal) If so, (2) it will be necessary to establish and present a fee schedule for services to be rendered; (3) produce an acceptable definition of medical indigency; and (4) submit a priority system of benefits such as (a) institutional care, (b) noninstiutional benefits such as office visits, home visits, provision of drugs, and hospital outpatient services.

By the time this article is published the Executive Council will have met in called session on November 28, and I assume that an acceptable answer to these propositions will have been worked out and submitted to the proper governmental agency in order that implementation may be started in the form of presentation of budget figures to the Advisory Budget Commission. You will receive a progress report on this operation soon, perhaps in the next *Public Relations Bulletin* or the President's Message of the January issue of this JOURNAL.

There is another important area of progress to be reported to you. The Medical School of the University of North Carolina is commencing to implement the "Sanger Report," which was a major factor in the establishment of this school. This will be the subject of an entire President's Message in a forthcoming issue of the Journal. I would like for all of you to write to the Medical Care Commission, P. O. Box 1880, Raleigh, North Carolina, and request a free copy of this report. Of particular pertinence to the background and understanding of this upcoming article are pages 18-32 inclusive.

I close this report with a sincere wish for you, your wife and family to enjoy a very happy Christmas season and a prosperous and healthy New Year.

AMOS N. JOHNSON, M.D.

CORRESPONDENCE

To the Editor:

I have read with some dismay your editorial in the October number of the Journal entitled "Medical Research, Choked by Dollars." This editorial, based in part upon an article by Mr. John M. Russell which appeared in the October issue of Harper's magazine, may have unfortunate effects upon the efforts of various fund-raising organizations to obtain support for medical research. I am very fearful that your editorial, as well as the article by Mr. Russell, may be misinterpreted by the general public.

As a member of the Research Policy and Allocations Committee of the North Carolina Heart Association. I am particularly concerned about the possible effects of your editorial. Perhaps a few facts concerning the North Carolina Heart Association would be in order. During the past year our Research Committee received 49 applications, rejected 10 of these requests, and granted 35. There were 4 applications for projects which the Committee considered worthy of support, but for which no funds were available. Of the 35 grants awarded, most of these were for amounts which, of necessity, were less than those requested by the investigators.

The North Carolina Heart Association grants are limited to $2000 for each project and are considered "seed" money to support research which may prove worthy of more detailed investigation, to support a postdoctoral scientist just beginning a research career, or to provide interim support for projects by established research workers. I am certain that it cannot be said of the North Carolina Heart Association that our research program is being "choked by dollars." I am very fearful that your editorial may have a very serious effect upon the success of the forthcoming campaign to ob-

tain support for the North Carolina Heart Association. I sincerely hope that in the near future you may see fit to show the other side of the research coin.

J. Logan Irvin
Chairman, Research
Policy and Allocations
Committee
North Carolina Heart
Association

* * *

To the Editor:

I read your editorial in the October issue of the North Carolina Medical Journal on "Medical Research Choked by Dollars". I know John Russell and have participated in several meetings with him. He is a man of unquestioned integrity and is dedicated to improving medical education. I would agree that he has first-hand knowledge on the subject about which he writes. He has an entreé to any medical school in the world, with the possible exception of those behind the Iron Curtain.

I am sure that the unprecedented expansion of medical research has resulted in many areas of undesired and possibly unnecessary waste. Rapid growth in any area is likely to be associated with apparent waste. Articles such as that by Mr. Russell cause one to pause and take inventory. I am sure, however, that such an article will be misinterpreted by many people, both in and out of the medical profession.

The reason for my writing is simply to point out that we have a meeting scheduled for tomorrow in Dr. Stead's office to discuss how we can meet the critical shortage of funds in our cardiovascular laboratory in the Department of Medicine. We are hopeful that our programs will not suffer and that the projects in progress in the laboratory will not have to be curtailed. The financial status of the research program in the cardiovascular section, however, is at present critical and we are unaware of being choked by dollars. Last week I loaned supplies to Dr. Madison Spach for use in his Pediatric cardiovascular research laboratory which I hope will tide him over a similar financial recession. He is unaware of being "choked by dollars." We will not try to justify the projects in our laboratory. Their significance must be determined by others. We are unaware of "terrific waste" in our laboratory.

I trust that the forthright and well-meaning comments of Mr. Russell will make us pause and re-evaluate our programs. I trust that they will not result in interruption of the logarithmic growth curve on which medical research is now located. I am fearful that his thought-provoking article will be misinterpreted and have a deleterious effect on the current rapid progress that is being made.

Henry D. McIntosh, M.D.

* * *

To the Editor:

I am writing you regarding the editorial "Medical Research Choked by Dollars" in the October Journal.

I have served as a member of the Research Policy and Allocations Committee of the North Carolina Heart Association for two years, as a member of the American Heart Association Research Committee for five years and as a member of the Physiology Study Section of the National Institutes of Health for three years.

At the meetings of these groups, all of the grant requests are carefully screened by experts in the various fields and all grants are declined outright where it is apparent that there would be unjustified duplication of work, or where it is apparent from the investigator's past record that he cannot use wisely the monies he has requested. Frequently the remaining meritorious grant requests have been reduced in amount in order to give at least some support to as many investigators as possible. Even with the reduction, frequently only one half to two thirds of the meritorious requests could be awarded. Even at the last meeting of our North Carolina Heart Association Research meeting, we found ourselves with over twenty meritorious requests but were able to support only half of these because of lack of sufficient funds.

Mr. Russell sees volunteer agency and Federal treasuries sending out choking waves of dollars. Yet with the above knowledge in mind, it is obvious that at least in my fields of interest, there are young scientists of promise with insufficient means of pursuing careers in medical research, and established medical scientists blocked by insufficient money from following fruitful ideas for the solution of disease problems.

We need *more* money for the improvement of medical education *and* for research. These

are not competing interests, but mutually dependent ones. One cannot be retarded without hurting the other. In the last twenty years, tremendous progress has been made in medicine—thanks to research. It would be a major setback to halt this impetus now by curtailing research funds, particularly when prospects are good for major accomplishments in many directions.

In the long run, all of us will be the beneficiaries of increased—not decreased—medical research.

Harold D. Green, M.D.
The Bowman Gray
School of Medicine of
Wake Forest College

* * *

IMAGINARY POVERTY

To the Editor:

Your notes on "Imaginary Poverty" in the October issue of the JOURNAL close with Dr. Beatson's queries about prevalence and treatment.

In Eugen Bleuler's careful description of the depressive psychoses, in his famous textbook[1], he shows that delusions of disease, of sin and of poverty are frequently part of the clinical picture. In my experience delusions of poverty affecting the wealthy are often part of the clinical picture of a depressive psychosis in North Carolina. Such patients often also suffer from insomnia and blame themselves for imaginary misdeeds for which their imaginary poverty or physical malaise is looked upon as punishment. It is essential that such patients secure adequate sleep as part of the treatment program. Moreover, an important aspect of their management is often to safeguard them against the risk of suicide. Because of the need for adequate nursing care and observation, these patients usually require treatment in hospital. Emergency psychotherapy often requires to be supplemented by electroshock therapy. With such patients my experience with so-called anti-depressant drugs has not been encouraging, whereas in general the response to E.S.T. is favorable. During the course of E.S.T. they require especially close observation—for this reason too they are appropriately dealt with as inpatients. At first, the risk of suicide may be enhanced before recovery.

Human beings of all cultures are subject to loss of loved ones, of youth, of physical health and of material possessions. Grief is thus a universal phenomenon among mortals. Since everywhere too ambivalence and guilt of varying degrees of severity are prevalent, some people react with severe depressive illness. Depressive psychoses with features similar to those described by Bleuler are of world-wide incidence. In my experience in this country, in United Kingdom, and in India, I have encountered many wealthy patients of diverse racial, cultural and educational backgrounds who have been afflicted with "imaginary poverty" as part of a depressive psychosis.

It should be added that this symptom is more conspicuous under those cultural conditions, as in Switzerland where Bleuler described it, where there is general preoccupation with wealth, and where money and prestige are closely associated. Banking and excessive concern with cleanliness, for example, are outstanding characteristics, among others, of Bleuler's native country. As was originally outlined by Freud[2], some people are characteristically excessively concerned about their possessions. With such people, in the event of a depressive psychosis, delusions of poverty are more often conspicuous. Perhaps this emphasizes needlessly the fact that money does not confer mental health, and that as your preceding editorial comment indicates there can be too much money.

D. Wilfred Abse, M.D.
U.N.C. School of
Medicine

References

1. E. Bleuler. Textbook of Psychiatry, translated by A. A. Brill, The MacMillan Co., New York, 1924.
2. Sigmund Freud. Character and Anal Erotism, Collected papers, Vol. II, Hogarth Press, London, 1924.

Mead Johnson Releases New Film

The concentric wavelets that flow outward when a stone is thrown into a pool symbolize the doctor's key relationships with the world around him in a new filmstrip of Mead Johnson's Management Principles in Medical Practice series.

It is the latest in the series of 30-minute animated filmstrips designed to assist young physicians in setting up and managing a practice. The strips are shown on request to medical schools, hospital teaching centers and other interested medical groups by specially trained Mead Johnson representatives.

BULLETIN BOARD

COMING MEETINGS

Duke University Medical Center, Lectures on Ophthalmology—Eye Clinic, Duke Hospital, Tuesday evenings, 7:30 p.m.

University of North Carolina School of Medicine, Postgraduate Course in Medicine—Edenton, Wednesdays, beginning January 11; Kinston, Thursdays, beginning January 12.

Governor's Conference on Occupational Health—Raleigh, January 26.

Conference of North Carolina County Medical Society Officers and Committee Members—Pinehurst, January 28.

Watts Hospital Symposium—Durham, February 3-4.

North Carolina Mental Health Association, Annual Meeting—Raleigh, February 17-18.

Forsyth County Cancer Symposium—Winston-Salem, March 9.

Medical Society of the State of North Carolina, Annual Meeting—Asheville, May 6-10.

Southeastern Surgical Association—Deauville Hotel, Miami Beach, Florida, March 6-9.

New Orleans Graduate Medical Assembly—Roosevelt Hotel, New Orleans, March 6-9.

NEW MEMBERS OF THE STATE SOCIETY

The following physicians joined the Medical Society of the State of North Carolina during the month of November, 1960:

Dr. Scott Bruce Berkeley, Jr., 712 Simmons Street, Goldsboro; Dr. John Dillard Workman, 505 Harding Avenue, Kinston; Dr. David Louis Whitaker, 1701 Queens Road, Kinston; Dr. Robert McClain Jamison, 300 Center Church Road, Leaksville; Dr. Nicholas William Sacrinty, 120 Monroe Street, Leaksville; Dr. Thomas Ward Kitchen, Jr., Lenoir; Dr. George Douglas Kimberly, 108 Main Street, Bakersville.

NEWS NOTES FROM THE BOWMAN GRAY SCHOOL OF MEDICINE

Four faculty members of the Bowman Gray School of Medicine were recently elected to the Society for Experimental Biology and Medicine.

They are Drs. Richard L. Burt, professor of obstetrics and gynecology; Thomas B. Clarkson, associate professor of experimental medicine; Hugh B. Lofland, assistant professor of biochemistry; and Norman M. Sulkin, William Neal Reynolds Professor of Anatomy.

* * *

Dr. Charles M. Howell, Jr., assistant professor of internal medicine (dermatology and allergy), presented a scientific exhibit on the "Systematic Management of Pruritus with Methdilazine Hydrochloride" at the Southern Medical Association meeting, October 31 to November 4, at St. Louis, Missouri.

Dr. Weston M. Kelsey, professor of pediatrics, was chosen president-elect of the North Carolina Pediatrics Society during a November meeting at Greensboro.

* * *

The Bowman Gray School of Medicine has received a $16,500 grant from the Charles F. Kettering Foundation for the continuation of studies in photosynthesis. Receipt of the grant was announced recently by Dr. C. C. Carpenter, dean of the medical school, and Dr. Frank H. Hulcher, assistant professor of biochemistry and principal investigator in the project.

Dr. Hulcher said the funds will be used to purchase equipment which will aid in a study of the role of cytochromes in the photosynthetic process.

* * *

Prof. Hermann J. Muller, Nobel laureate in physiology and medicine, spoke recently at the Bowman Gray School of Medicine on "Radiation Damage in the Light of Genetics." The University of Indiana professor's visit was sponsored jointly by the school's committee on Medical Education in National Defense and the Student American Medical Association.

* * *

Dr. Walter J. Bo, associate professor of anatomy, presented "Relation of Vitamin A Deficiency and Estrogen in Producing Uterine Metaplasia" at a University of Illinois symposium, November 7 and 8. The symposium on metabolism and function of the fat-soluble Vitamins A, E and K was co-sponsored by the National Vitamin Foundation and the University of Illinois.

* * *

Dr. William H. Boyce, professor and chairman of the Department of Urology, was a guest participant in the James C. Kimbrough Urological Seminar at Walter Reed General Hospital, November 3 to 5, at Washington, D. C. He participated in panel discussions on the "Diagnostic Problems in Urologic Roentgenography" and "Therapeutic Problems in Urology" and presented a movie he had prepared on the "Advances in the Surgery of Renal Calculi."

On November 7, Dr. Boyce lectured to students and faculty of the University of Virginia School of Medicine on "Non-dialyzable Substances in Normal Human Urine."

* * *

Faculty members participating in the annual meeting of the North Carolina Division of the American Cancer Society, November 5 and 6, at Raleigh were Drs. Isadore Meschan, professor of radiology; Robert W. Prichard, associate professor of pathology; Harry M. Carpenter, assistant professor of pathology; and John C. Pruitt, research associate in pathology. Dr. Meschan spoke on tumor registeries in North Carolina, Dr. Prichard on cancer quackery and Drs. Carpenter and Pruitt spoke on cancer immunity.

* * *

Dr. Joseph S. Keenan, instructor in speech (otolaryngology), presented "Oral-pharyngeal Correla-

tives of Speech Characteristics in Adults with Unrepaired, Incomplete Cleft Palates," November 2, at the annual convention of the American Speech and Hearing Association in Los Angeles, California. Dr. Keenan also presented papers on stuttering at the 12 annual Conference on Education for Exceptional Children, November 17 and 18, at Greensboro.

* * *

Training Program in Radiation Biology and Cancer-Related Research

The Bowman Gray School of Medicine is beginning a training program in Radiation Biology and Cancer-Related Research. One, two, and three year traineeships are being offered to research oriented people in the basic and clinical sciences. The traineeships are being offered both at pre-doctoral and post-doctoral levels, and stipends will range from $1,800.00 to $8,000.00 per annum.

It is believed that this program will represent an excellent opportunity for young men interested in research to learn radiation methodology and tracer techniques. A two-part course is offered for the first year trainees. One part is given in didactic lecture form, and consists of a rather detailed survey of the body of knowledge in radiation biology as related to cancer research. The other part is a survey of the techniques used in actual laboratory investigation, and is taught mainly by demonstrations. The first year trainee will be expected to spend a good part of his time in the laboratory learning the techniques which most suit his field of interest. Second and third year trainees will be given the opportunity to do more advanced and independent research, employing radiation methods in his own chosen field of interest.

Applications for the training program are being accepted now for beginning in January of 1961, and will be accepted until April 15, 1961 to begin July 1, 1961. All inquiries may be directed to Donald J. Pizzarello, Executive Director, Radiation Biology and Cancer Related Research Training Program, Bowman Gray School of Medicine, Winston-Salem, North Carolina.

News Notes from the University of North Carolina School of Medicine

The University of North Carolina School of Medicine has been awarded $897,528 by the National Institutes of Health for establishment of a clinical research facility.

Announcement of the award, which will cover a three-year period, was made recently by Dr. W. Reece Berryhill, dean of the School of Medicine. Dr. Berryhill said the new research unit would be directed by Dr. Walter Hollander, Jr., assistant professor of medicine and Markle Scholar in medical science. Dr. Hollander is a graduate of the Harvard School of Medicine and has been on the UNC faculty for four years.

Under this grant, the School of Medicine will have a type of research facility not hitherto possible permitting intensive study and treatment of all types of patients.

Plans are under way to have the unit opened by next spring or early summer. For the first several years, it will temporarily occupy one floor of the south wing, which was made possible because the Department of Psychiatry voluntarily agreed to release the space for this purpose. A permanent location for the new facility will be arranged at a later date.

Patients will be treated in the research facility without any charges, either for hospital room or for professional services. Patients will be admitted on a volunteer basis provided their illness is one which is under investigation in the research programs of the School of Medicine.

The staff for the new facility, to be named later, will be the same as that of a regular general hospital ward supplemented by research nurses and other specialized personnel required for the more intense observation and study of these patients.

The facility will open with 10 beds for patient care, all to be located in private or semi-private rooms. This will eventually be increased to 12 to 15 beds.

* * *

Two appointments and one promotion have been announced in the School of Medicine by Chancellor William B. Aycock.

Dr. David F. Freeman has been named assistant professor in the Department of Psychiatry of the School of Medicine, effective next year.

A native of Raleigh, Dr. Freeman received his undergraduate education at Wake Forest College, and his medical degree was awarded by the Bowman Gray School of Medicine in 1951. He has served with the North Central Mental Health Consultation Service, Fitchburg, Massachusetts; Waltham (Massachusetts) Hospital and the Douglas A. Thom Clinic for Children of Boston.

Francis Byers de Friess an expert in radiological physics, has been appointed research associate in the Department of Radiology of the School of Medicine. He joins the staff from the Columbia-Presbyterian Medical Center of New York City.

Dr. Joseph K. Spitznagel has been promoted from assistant professor to associate professor in the Department of Bacteriology of the School of Medicine. He is a U. S. Public Health Service Senior Research Fellow and has been a member of the faculty since 1957.

* * *

Approximately 75 physicians from throughout the state and a number from South Carolina and Virginia attended the U.N.C. Medical Symposium in Chapel Hill, November 17 and 18.

Participating on the program were Dr. Eddy D. Palmer, Lieutenant Colonel, Brooke General Hospital, Fort Sam Houston, Texas; and a number of faculty members from the three medical schools in the state.

* * *

A two-state "hospital development program" was held at the University of North Carolina in Chapel Hill Monday and Tuesday, November 28 and 29,

sponsored by the North and South Carolina Hospital Associations.

Dr. Robert R. Cadmus, director of N. C. Memorial Hospital, is president-elect of the association and presided at one of the sessions, which was addressed by Prof. Claude George, assistant dean of the U.N.C. School of Business Administration.

* * *

The University of North Carolina School of Medicine staged four 30-minute weekly television programs which began Thursday, November 10 and which followed the general theme of "A Report to the People from the School of Medicine."

The series was seen over the UNC television station, WUNC-TV, Channel 4, each Thursday at 9:30 P.M.

* * *

The National Society for the Prevention of Blindness sponsored an Eye Health Workshop which was held at the School of Medicine of the University of North Carolina on November 30.

Of interest to public health nurses and teachers, principals, school supervisors and education personnel throughout western North Carolina, the workshop is the first of its kind to be held here.

Mrs. Mary Metlar of the State Board of Health in Raleigh presided over the meeting, and W. P. Richardson, M.D., assistant dean for Continuation Education, gave the welcoming address. Special speakers included: Maxwell Morrison, M.D. resident in ophthalmology; S. D. McPherson, M.D., head of the ophthamology division; and Helen Gibbons of the National Society for the Prevention of Blindness.

During the afternoon a special session on the demonstration and evaluation of school vision screening methods was discussed.

* * *

Dr. T. Franklin Williams, assistant professor of preventive medicine and medicine addressed the annual meeting of the Association of American Medical Colleges at Hollywood Beach, Florida recently. His subject was "The Referral Process in Medical Care and the University Clinic's Role."

Other faculty members attending the annual meeting, were: Dr. W. Reece Berryhill, dean; Dr. William L. Fleming, professor of preventive medicine and medicine and assistant dean for education and research; and Dr. Carl Anderson, professor of biochemistry and nutrition and assistant dean for student affairs.

The paper that Dr. Williams presented was prepared by himself; Dr. Kerr L. White, associate professor of preventive medicine and medicine and Dr. Bernard G. Greenberg, professor of biostatistics, UNC School of Public Health.

* * *

Women delegates from some 40 Tar Heel hospitals participated in a one-day symposium in Chapel Hill recently sponsored by the Women's Auxiliary of N. C. Memorial Hospital of the University of North Carolina.

The theme of the symposium was "The Functions of the Hospital Volunteer in the Community and in the Hospital." The purpose of the meeting was to have an exchange of ideas that would be mutually helpful to all hospital volunteer groups.

Speakers were Major L. P. McLendon of Greensboro, past president of the Medical Foundation of North Carolina; Dr. Paul Whitaker of Kinston, also past president of the Medical Foundation of North Carolina; and Dr. Robert Cadmus, director of N. C. Memorial Hospital.

Their talks were followed by five separate group discussions.

The day-long meeting closed with a tour of various areas of N. C. Memorial Hospital where volunteers work. The tour was under the direction of Mrs. V. A. Hill of Chapel Hill.

News Notes from the Duke University Medical Center

Dr. Wiley, Dr. Forbus, professor and former chairman of the Duke University Medical Center's Department of Pathology, has accepted an assignment to head the reorganization of a medical school in Indonesia.

On leave from the Duke faculty, he will spend the next two years at the medical school of Airlangga University in Surabaja, located near the eastern end of the island of Java.

Dr. Forbus will serve on the University of California staff as director of that institution's program to rehabilitate the Indonesian medical school.

The project will be conducted by the University of California under contract with the International Cooperative Administration, part of the United States' foreign aid program.

The Duke pathologist will be chief of party for the undertaking and will direct a staff of some 15 American medical educators. Also, he will be advisor on medical education to the dean of the Airlangga University medical school.

Dr. and Mrs. Forbus will leave Durham on Dec. 15 and are scheduled to return in January, 1963. Dr. Forbus will continue his academic duties at Duke from that time until his retirement from the faculty on Sept. 1, 1963, at the age of 69.

Federal funds of approximately $1 million have been allotted for the Airlangga medical school project. Facilities will be improved, and the curriculum revamped along the lines of American medical education. Established in 1911, the school has an enrollment of some 1,000 students.

Dr. Forbus' new assignment will mark his third venture in Far Eastern medical education.

During 1953-54, he reorganized the pathology department and initiated an over-all medical school curriculum reorganization at the University of Taiwan, Formosa, as part of the U. S. government mission to Free China.

Four years ago, he served in a similar capacity at Keio University in Tokyo, Japan, under auspices

of the Rockefeller Foundation and the China Medical Board,

Also, he has surveyed medical education in the Orient for the China Medical Board and has visited U. S. Army hospitals in the Far East as a consultant to the Army Surgeon General.

One of the original faculty members of the Duke Medical Center, Dr. Forbus headed the pathology department from 1930 until he relinquished the chairmanship this year.

* * *

Duke University medical researchers have developed a new laboratory technique that offers a practical approach toward conquering cancer of the cervix.

The technique uses movie film and plastic spray instead of conventional glass slides to mount specimens for study under microscopes. Specimens are placed on the transparent 35 mm. leader film and then sprayed with plastic for protection.

Originators of the process are John Phillip Pickett of the Duke Medical Center's pathology laboratory staff and Dr. Joachim R. Sommer, assistant professor of pathology.

* * *

Duke University's expanded program of nursing scholarships has entered its second year, with applications for the 1961-1962 competition now being accepted.

Purpose of the scholarships is to encourage young women who give promise of becoming leaders in the field of nursing, according to Robert L. Thompson, executive secretary of the University Scholarship Committee.

Financial need is not a factor in making the awards, Thompson explained, but the stipend assigned to each winner will vary according to the financial circumstances of the recipient.

Any student who has been accepted for enrollment as a freshman in the School of Nursing is eligible to enter the scholarship competition.

Application forms must be submitted to the School of Nursing before February 1, 1961.

Forsyth County Medical Society

The Forsyth County Medical Society held its regular monthly dinner meeting in Winston-Salem on November 8. Dr. Jesse Meredith of the Bowman Gray School of Medicine spoke on "Surgery in Russia Today."

Edgecombe-Nash Medical Society

The Edgecombe-Nash Medical Society met in Rocky Mount on November 10 in conjunction with the Fourth District Medical Society.

Tenth Annual Symposium on Cancer

The tenth annual Symposium on Cancer sponsored by the Forsyth County Medical Society and the Forsyth County Cancer Service will be held at the Robert E. Lee Hotel in Winston-Salem on March 9, 1961.

Participants in the symposium will include Drs. Cyrus C. Erickson, professor of pathology, University of Tennessee School of Medicine, Memphis; John C. Hawk, Jr., director of the Cancer Clinic, Medical College of South Carolina, Charleston; Stuart W. Lippincott, senior pathologist to Research Hospital, Brookhaven National Laboratory, Upton, Long Island, New York; George E. Moore, director of Roswell Park Memorial Institute, Buffalo, New York.

North Carolina Radiological Society

At the fall meeting of the North Carolina Radiological Society the following officers were elected: president—Dr. I. Meschan, Winston-Salem; president-elect—Dr. Owen W. Boyle, Greensboro; secretary-treasurer—Dr. A. B. Croom, High Point.

North Carolina Kidney Disease Foundation

The North Carolina Kidney Disease Foundation for nephritis, nephrosis, and allied kidney diseases is accepting applications for research grants from investigators in North Carolina. Applications, which may be obtained from the Medical Advisory Board of the chaper, must be completed and sent to the Board on or before February 1, 1961.

The grants will be made to support both basic and applied research in the field of nephrosis, nephritis, and allied kidney disorders. They are designed to help investigators test new ideas, to provide needed equipment, or to assist in established research programs. For the present, only applications for less than $1,000 will be considered.

For further information and application blanks, address all inquiries to Jerome S. Harris, M.D., Chairman, Medical Advisory Board, Duke University Medical Center, Durham, North Carolina.

Pediatric Research Institute Chartered

The chartering of Wrightsville Pediatric Research Institute, Inc., as a non-profit corporation was announced recently by Mr. Thomas H. Wright, Jr., chairman of its Board of Trustees. Financing of the corporation's research activities has been provided for in the recent establishment, by an anonymous donor, of a $1,000,000.00 charitable foundation. The new facility, operating under the name Babies Hospital Research Center, will occupy a building to be constructed with funds given by Babies Hospital, Inc., and Dr. J. Buren Sidbury. Matching funds for construction and equipment will be sought from the medical research program of the federal government.

The Babies Hospital Research Center will be located near, and operated in close conjunction with,

the Babies Hospital at Wrightsville Sound. As an established center of pediatric medicine and surgery, the hospital attracts a wide variety of patients from a large geographic area, and the availability of such a variety of cases for study will be mutually advantageous to the research facility and to the patients themselves.

The staff of the Babies Hospital Research Center is expected to include a director of research, an assistant director, a number of laboratory technicians, and other personnel. The center will be managed by a board of trustees whose membership will include: Mr. Thomas H. Wright, Jr., chairman; Dr. Louis K. Diamond, Children's Hospital, Boston, Massachusetts; Mr. Lawrence Lewis, Jr.; Mr. Peter Browne Ruffin; Dr. Donald B. Koonce; Mr. S. L. Marbury; Dr. Rowena S. Hall; Mr. Daniel H. Penton; Mr. Edward G. Lilly, Jr.; Mr. Robert A. Little; Dr. Joseph W. Hooper, Jr.; Mr. Walker Taylor, Jr.; and Dr. J. Buren Sidbury.

New Orleans Graduate Medical Assembly

The New Orleans Graduate Medical Assembly will hold its meeting March 6-9, 1961, in the headquarters at the Roosevelt Hotel, New Orleans. Following the meeting in New Orleans, the Postgraduate Assembly will go on the seventeenth annual clinical tour, involving visits to Los Angeles, Honolulu, Manila, Hong Kong, Japan.

Further information may be obtained from the Secretary of the Assembly, Dr. Mannie D. Paine, Jr., 1430 Tulane Avenue, New Orleans 12, Louisiana.

American Medical Writers' Association

Dr. Lowell T. Coggeshall, vice president of the University of Chicago, has been honored as recipient of the 1960 Honor Award given by the American Medical Writers' Association.

The Honor Award is given from time to time to "non-members of the Association who have made distinguished contributions in writing, editing, publishing, or other means of communication in medicine or allied sciences."

Dr. Dean F. Smiley, of Evanston, Illinois, executive director, Education for Foreign Medical Graduates, formerly editor of the **Journal of Medical Education,** has been honored as recipient of the 1960 Distinguished Service Award given to a fellow of the Writers' Association.

The Distinguished Service Award is given annually to a fellow of the Association "who has made distinguished contributions to medical literature or rendered unusual and distinguished services to the medical profession."

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

JAMA

VOL. 174, NO. 5 OCTOBER 1, 1960

newest J.A.M.A. paper[1] reports

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American Board of Obstetrics and Gynecology

The Part 1 Examinations (written) will be held in various cities of the United States, Canada, and military centers outside the Continental United States on Friday, January 13, 1961.

Reopened candidates will be required to submit Case Reports for review 30 days after notification of eligibility.

Scheduled Part 1 candidates are also required to submit their 20 case abstracts in order to complete the Part 1 Examination.

Current Bulletins outlining present requirements may be obtained by writing to office of the Executive Secretary, Robert L. Faulkner, M.D., American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

Student American Medical Association

The New Physician, second largest official medical publication in the United States, received the Honor Award for Distinguished Service in Medical Journalism last night at the Seventeenth Annual Meeting of the American Medical Writer's Association held recently in Chicago. The journal is the official publication of the Student American Medical Association.

The award, in the category of general medical periodicals with over 3,000 circulation reads: ". . . for accuracy, clarity, conciseness and newness of information; for excellence of design, printing and illustrations, and for distinguished service to the medical profession".

American College of Surgeons

Two sectional meetings included on the 1961 schedule of the American College of Surgeons will be of interest to surgeons in this region.

The first will be held at the Dinkler-Tutwiler Hotel in Birmingham, Alabama, January 16-18. Dr. Arthur I. Chenowith of Birmingham is local chairman.

The second, a four-day sectional meeting for surgeons and graduate nurses, will be held in Philadelphia, March 6-9. Dr. Jonathan E. Rhoads of Philadelphia is chairman of the surgeons' meeting.

All sectional meetings are under the supervision of Dr. H. Prather Saunders, Associate Director, American College of Surgeons. For information concerning either meeting, write to Dr. William E. Adams, Secretary, American College of Surgeons, 40 East Erie Street, Chicago 11, Illinois.

* * *

The forty-seventh annual Clinical Congress of the College will be held October 2 through 6, 1961, in Chicago.

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1. Barclay, P. L.: J.A.M.A. 174:474. Oct. 1. 1960.

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Conference on Neuropsychopharmacology

The advancement of neuropsychopharmacology was the theme of a conference held in New York City on Novembr 12 and 13. Clinical psychiatrists, educators, researchers in basic sciences as well as clinical investigators participated. The chairman of the conference was Paul H. Hoch, M.D., Commissioner, Department of Mental Hygiene, State of New York, and the secretary pro tempore was Theodore Rothman, M.D., Department of Psychiatry, University of Southern California School of Medicine. Evaluations of present day methods of training investigators and testing drugs, and the difficulties in obtaining swift dissemination of accurate information to the medical profession were critically discussed.

Among the recommendations was that a new society be formed, with the purpose of advancing knowledge in this important area of psychiatric research.

The next meeting of the committee is scheduled for February, 1961, and it is probable that the new society will be organized in time for the May meeting of the American Psychiatric Association.

Association of Military Surgeons

The sixty-seventh annual meeting of the Association of Military Surgeons of the United States, which closed its session on November 2 with the Honors Night Dinner, was attended by 2086 persons.

New officers for 1961 are: president—Leroy E. Burney, M.D., The Surgeon General of the U. S. Public Health Service, Washington; first vice president—Major General James P. Cooney, U. S. Army, Retired; Secretary—Colonel Robert E. Bitner, U. S. Army, Retired.

The sixty-eighth annual meeting will be held at the Mayflower Hotel, Washington, D. C., November 6, 7, and 8, 1961.

International Congress of Allergology

The fourth International Congress of Allergology will be held at the Hotel Commodore, New York City, October 15-20, 1961. It is anticipated that this will be a large and interesting meeting for all those concerned with allergic diseases and related fields of immunology. At the main meetings, there will be simultaneous translations of all papers in English, French, German, and Spanish. Prominent physicians and scientists, from all parts of the world, have been invited to take part in conferences, symposiums, and panel discussions.

All physicians registering are invited to present communications which will be grouped in various sections according to subject matter. An active program of entertainment is being arranged, with several receptions, one at the Metropolitan Museum of Art, and a banquet. For the ladies, there will be a program of luncheons, fashion shows, and visits to the United Nations and other points of interest.

The registration fee for regular members will be $45.00, for wives $20.00. These fees will include the printed proceedings and admission to the receptions. The banquet will be charged separately. As the attendance is expected to be large, it is requested that persons interested obtain information from Dr. William B. Sherman, 60 East 58th Street, New York 22, New York.

American Nursing Association

Delegates to the American Nursing Home Association convention in Washington voted in favor of a resolution that gives the green light to one of its special committees to work out the details of a plan for accreditation of nursing homes. A special fund has been set aside for that purpose.

Calling for several levels of supervision, the ANHA accreditation program would be set up on a nation-wide basis.

The basic program, as proposed by the Accreditation Committee to the convention, calls for a grouping of nursing homes into three categories: intensive care facility, intermediate care facility, and supervised-living care facility.

In advocating an ANHA accreditation program, Dr. Kocovsky made it clear that its creation does not indicate any lack of interest in plans of the Tripartite Committee on Accreditation, consisting of representatives of ANHA, The American Hospital Association, and American Medical Association.

The Arthritis and Rheumatism Foundation

Plans for a national conference of leaders concerned with the health menace of arthritis quackery have been announced by Floyd B. Odlum, national chairman of The Arthritis and Rheumatism Foundation. The conference will be held early in March, 1961, in Washington, D. C., according to the announcement made at the voluntary health organization's twelfth annual meeting at the Hotel Commodore in New York.

World Medical Association

Dr. Heinz Lord, a practicing surgeon of Barnesville, Ohio has been elected by the General Assembly to succeed Dr. Louis H. Bauer of New York City as Secretary General of The World Medical Association.

Dr. Lord, a Peruvian citizen by birth, although actually born and received his preliminary education in Germany, will become Secretary General of The World Medical Association on January 1, 1961.

The retiring Secretary General, Dr. Louis H. Bauer was appointed to that position in 1948. On January 1, 1961 he will become Consultant to The World Medical Association.

Institute of Industrial Health

The University of Cincinnati's Institute of Industrial Health is offering graduate fellowships in Industrial Medicine. The Institute, which is in the College of Medicine, provides professional training for graduates of approved medical schools who have completed at least one year of internship.

The three-year program leading to the degree of Doctor of Industrial Medicine satisfies the requirements for certification in Occupational Medicine by the American Board of Preventive Medicine.

Requests for additional information should be addressed to The Secretary, Institute of Industrial Health, College of Medicine, Eden and Bethesda Avenues, Cincinnati 19, Ohio.

Air Research and Development Command

Brigadier General Benjamin A. Strickland, Jr., who has served as surgeon of a horse-drawn field artillery regiment and on the Bernard Baruch Committee on Physical Medicine and Rehabilitation, has been assigned to Headquarters, Air Research and Development Command (ARDC), Washington, D. C.

General Strickland recently became ARDC's Deputy Assistant for Bioastronautics. Previously he held the dual assignment of command surgeon of Continental Air Defense Command and Air Defense Command at Colorado Springs, Colorado.

Dr. Strickland was born in Whitakers, North Carolina and received his medical degree from Duke University School of Medicine in 1933. Two years later he entered military service and embarked on a distinguished career in military medicine.

Because of his extensive background in Physical Medicine and Rehabilitation General Strickland was chosen by the Army Surgeon General in 1943 to serve on the Bernard Baruch Committee on Physical Medicine and Rehabilitation. He worked with Mr. Baruch from 1943 to 1945 on rehabilitation of World War II sick and wounded.

In 1947 while assigned in the Army Surgeon General's office as Chief of Physical Medicine Consultants Division, General Strickland was elected to the position of Vice Chairman of the American Board of Physical Medicine and Rehabilitation.

A year later he was assigned to the USAF School of Aviation Medicine, Randolph AFB, Texas, where he did extensive research in air sickness and in air evacuation of the sick and injured. His assignments at the School of Aviation Medicine included the position of Director of Military Medicine and later Chief of the Department of Internal Medicine.

General Strickland did the initial planning and organization of the Gunter Branch of the School of Aviation Medicine and served as Commandant of this School from 1 August 1951 to 1 October 1953.

Rated as a Chief Flight Surgeon, Dr. Strickland is certified in aviation medicine and in physical medicine and rehabilitation. He is the author and/or co-author of 31 medical and scientific publications on various aspects of aviation medicine, and physical medicine and rehabilitation.

U. S. Department of Health, Education, and Welfare

Responsibility for planning and operating the Nation's emergency medical stockpile program has been assumed by the Public Health Service, it was announced recently by the Office of Civil and Defense Mobilization and the Department of Health, Education, and Welfare.

This plan, part of the National Plan for Civil Defense and Defense Mobilization, aims at developing an organization and procedures for managing medical facilities, personnel and resources for national emergencies.

The transfer of authority involves about $200 million worth of medical supplies and equipment located in 33 warehouses throughout the country. Included in the stockpile are 1,932 "packaged" 200-bed hospitals for civil defense emergency use, valued at $20,000 each. About 1,500 of these are now stored at strategic locations across the country and others are in use for demonstration purposes and for training personnel.

Stockpiling responsibilities of the Public Health Service, under OCDM policy control, will include procurement, maintenance, storage, inspection, quality control, distribution, utilization and property accountability of essential survival supplies and equipment.

Hospital Food Costs

The cost of preparing patient meals in the nation's hospitals averages $3.64 per patient day, according to a report in *The Modern Hospital* magazine.

The professional journal said the cost of feeding patients is one of the largest hospital operating expenses.

Nationally the cost per patient day ranges from a low of $2.11 in city, county and state hospitals in the south and southwest to $5.88 per patient day in hospitals of 250-or-more beds in the western states.

Classified Advertisement

WANTED: Intern or resident doctor with North Carolina license to relieve me for vacation from January 23 through February 1st. General practice without obstetrical deliveries. You may use my car, my house, hospital facilities and consultants. State salary expected. Please contact me at once. Samuel H. Justa, M.D., 513 Sunset Avenue, Rocky Mount, N. C.

FOR SALE: Burdick EK-2 Electrocardiograph machine. Burdick Ultra-violet lamp. McKesson Basal Metabolism machine. Continental X-Ray and Fluoroscope combination machine, together with all the necessary accessories. Continental Diathermy machine. All of the above are in perfect working order. If interested, contact: Dr. A. L. Feuer, 411 South Marietta Street, Gastonia, North Carolina.

BOOK REVIEWS

Human Pituitary Hormones. Vol. 13, Ciba Foundation Colloquia on Endocrinology. Edited by G. E. W. Wolstenholme and Cecilia M. O'Connor. 321 pages. Price $9.50. Boston: Little, Brown and Company, 1960.

Not too many years ago at that circus without tents called endocrinology, the pituitary problem was a sideshow peopled by immature giants and grotesque wrestlers, bearded ladies, and Tom Thumbs. To reduce such chaos to understanding demands a master hand; fortunately it was available in the person of Professor B. A. Houssay. It is particularly fitting that this colloquium was held in Buenos Aires in his honor; that it could be held there is no small tribute to his own undeviating courage in opposing the shallow authoritarianism and shabby opportunism of the Peron regimen with his own scrupulous regard for freedom of inquiry and the universality of knowledge.

What Houssay found in the sideshow has now taken over one full ring of the circus, which is now more active than all three once were. Such an advance is the reason for this colloquium. The rapidly expanding knowledge of the chemistry of anterior pituitary secretion is summarized in excellent reviews by Wilhelmi, Li, Genzell, Lee and Lerner, and Ieuan Harris. The many facets of growth hormone activity are considered by Raben, Luft and Beck, and by Russell Fraser, who propounds the most surprising views of the session in his discussion of the effects of growth hormones on parathyroid homeostasis. Other presentations include evaluations of pituitary gonadotrophin assay and of thyrotrophic hormone in blood. In fact the only unexpected omission is the lack of spirited discussion of means of assaying exophthalmos-producing hormone by injecting appropriate materials into various species of goldfish. There is even a stimulating discussion about terminology, without which no such session is truly complete—just as typically the language must continue to be too inexact to satisfy all participants.

For the initiated such a session must be stimulating; for the would-be initiate, confusing but encouraging; and for the rest of us, prodigious and provocative.

Congenital Malformations. Edited by G. E. W. Wolstenholme and C. M. O'Connor. 308 pages. Price, $9.00. Boston: Little, Brown and Company, 1960.

This volume records the proceedings of a general symposium devoted to congenital malformations sponsored by the Ciba Foundation. It is comprised of 12 papers (chapters) and the discussion which followed each. The last chapter presents a general discussion of the problem. The chapters range in character from those presenting a general account of the role of genetic or environmntal factors in the particular etiology of congenital malformations to those reporting on the effects of particular teratogenic agents.

As is frequently the case in "non-books," it is difficult to evaluate a volume in which the chapters vary so widely in nature and quality. The papers by McKeown and Record on a five-year epidemiologic study of congenital malformations and by McLaren and Michie on congenital runts described well designed studies. The several papers on particular teratogenic agents point up the necessity for caution in the use of certain antimetabolites and anti-biotics in the pregnant patient. Tuchmann-Duplessis and Mercier-Parot, for instance, described experiments in rats which demonstrated that Actinomycin D is a most potent teratogen in the rat at dosage levels significantly lower than those being employed in human patients. These experiments are being extended to the rabbit, and preliminary results indicate that rabbit embryos are also adversely affected.

In spite of the fact that most of the material presented is available elsewhere, there is doubtless value in bringing together embryologists, epidemiologists, geneticists, and clinical research workers and in presenting samples of their work in a single volume. Obstetricians and pediatricians will be especially interested in learning of the present directions, perspectives, and limitations of current research on congenital malformations.

The Role of the Physician in Environmental Pediatrics. By Carl C. Fischer, M.D. 122 pages. New York: Landsberger Medical Books, Inc., 1960.

This short, well written book discusses the problems other than bodily disease about which the modern pediatrician must have knowledge.

Dr. Fischer discusses accidents, adoption, school health, handicaps, and adolescence in 150 pages. Obviously, he has spent few words on generalizations and has given his evidence, stated his views on the problems, and made his suggestions in a concise manner.

The physician's role in accident-prevention is primarily educational. In adoptions, he should inform himself of the local laws and procedures and become able to counsel intelligently with families seeking adopted children. Furthermore, if the local laws and practices are not standardized nor satisfactory, it is incumbent upon him to do what he can to improve or change them. He should find out what the local school health program is and do his utmost to improve it through personal, active participation, and by means of advice to those concerned with its administration.

Dr. Fischer covers handicaps in an holistic manner, from cosmetic to social handicaps, discussing cause, control and cure where these are known, and the proper handling of all types of handicaps. He suggests that an adequate community program for handicapped children would encompass: Enumera-

tion, Evaluation, Education, Irradication, and Emancipation.

The chapter on adolescence is a monograph in miniature, and intelligently covers all the parameters of this period of life. His section on juvenile delinquency is exceptionally well thought through.

This small volume is recommended to pediatricians and to all physicians who care for children and adolescents. It does not answer a great many questions regarding therapy, but it emphasizes problems that have long been overlooked by many physicians.

The Development of the Infant and Young Child: Normal and Abnormal. By R. S. Illingworth, M.D. 318 pages. Price, $6.50. Edinburgh and London: E. & S. Livingstone, Lmt., The Williams & Wilkins Company, Baltimore, exclusive U. S. agents, 1960.

It is recognized that a knowledge of child development and its variations is necessary for anyone responsible for the management of infants and children. In spite of this, few of the books dealing with development are both factually correct and at the same time interesting. Dr. Illingworth has accomplished both of these aims in this book. He has critically discussed many areas in development and documented these discussions with an excellent bibliography. Because much of the work in development is not mathematically accurate, much of the material must remain a matter of opinion. This reviewer feels that Dr. Illingworth has presented his opinions in a logical and reasonable manner.

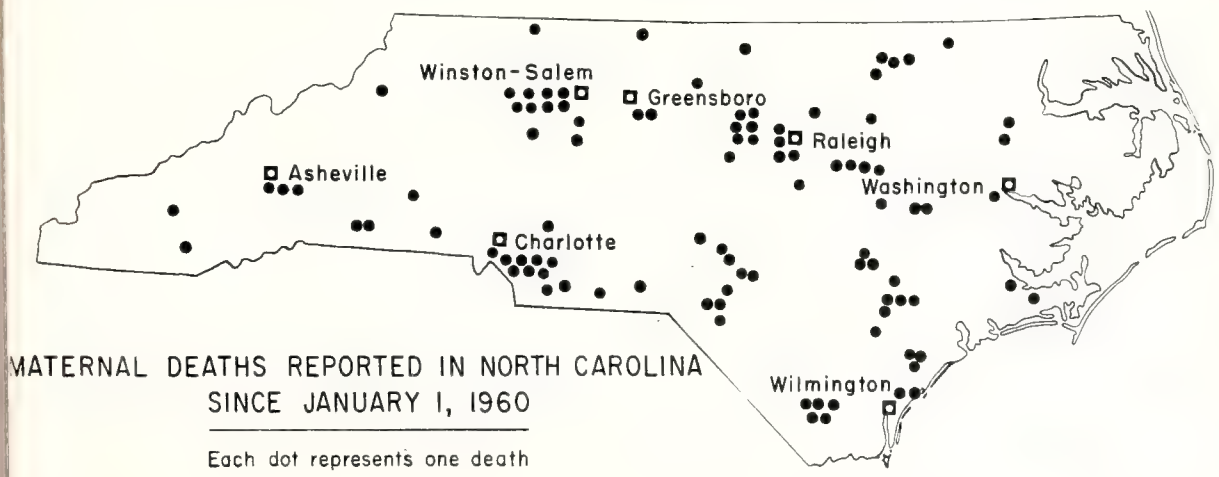
Certain chapters are of unusual interest. The chapter on the predictive value of development assessment is superior. His discussion of the prenatal and perinatal factors governing subsequent development is up-to-date. The chapter on the association of physical defects with diseases of mental development forms a good reference for anyone who is concerned with syndromes involving mental retardation. His discussion of normal development is a good review but adds little new information in this field. The chapter entitled "Variations in Individual Fields of Development" emphasizes well the fact that children should be considered as individuals. The final chapter, on the mistakes and difficulties in developmental diagnosis, is an extremely clear discussion of the possible errors one can make in interpreting the developmental status of the infant or child.

This reviewer feels that this book is the most adequate single source of information concerning the field of development that he has read. It is believed that the facts are correct and that the interpretations are reasonable. Equally important, the book is written in a manner to hold the reader's interest. It can be strongly recommended for anybody involved in the management of infants and children. Obviously, this factor is of particular interest to pediatricians, psychologists, and the various personnel involved in mental evaluation.

Much of the material would be of value to people who counsel parents concerning future pregnancies. For this reason, obstetricians and general practitioners would find this book of great value.

Sight, A Handbook for Laymen. By Roy O. Scholz, M.D. 166 pages. Price, $3.50. Garden City, New York: Doubleday and Company, Inc., 1960

Sight, A Handbook for Laymen adequately covers an admittedly difficult subject for the most fickle audience, the general public. Dr. Scholz displays great talent in maintaining the precarious but necessary balance between over-simplification on the one hand, excessive detail on the other. This informative little book is full of practical information, particularly for any patient who has an eye problem. The chapter on the cataract is especially helpful for the patient with this disorder. Excellent chapters on contact lenses, glasses, glaucoma, and childhood eye problems are included. The routine



eye exmination is described and the value of eye exercises is questioned.

The chief criticism occurring to the medical reader is the inevitable errors which seem to crop up on a book of this sort. In spite of this drawback, the volume is a refreshing respite from the wild "medical" claims and exaggerations constantly encountered in the lay press. For patients with ocular problems, this book is recommended reading.

Arthritis and Rheumatism Foundation Issues Report

The Arthritis and Rheumatism Foundation has announced the publication of a report entitled **The Misrepresentation of Arthritis Drugs and Devices in in the United States.** The 166-page book is an official documentation of the Foundation's claim that the nation's 11,000,000 arthritis victims are being cheated of more than $250,000,000 yearly on misrepresented products and phony "cures."

The report presents for the first time a comprehensive review of misrepresented arthritis products and their promotion. It also discusses government legislation pertinent to the problem.

The study which resulted in publication of the report was undertaken as part of the Foundation's program to alert the public to the dangers of indulging in misrepresented or worthless treatments while postponing effective medical care.

Copies of **The Misrepresentation of Arthritis Drugs and Devices in the United States** are available from The Arthritis and Rheumatism Foundation, 10 Columbus Circle, New York 19, New York. The price is $3.50 per copy.

In Memoriam

John Haywood Stanley, M.D.

WHEREAS in the Province of God, Dr. J. H. Stanley of Four Oaks, North Carolina, our brother and fellow member of the Johnston County Medical Society, has fallen asleep and passed on to give an account of his work among us, therefore be it

Resolved that it is the desire of his fellow members to give an expression of their love, respect and admiration for our departed brother. We recognize in him a man of worth and a friend of all; a doctor believed and trusted in a special manner by his people, having served them for the unusual period of more than 50 years; a good attendant upon the meetings of this county medical society, and an honorary member of the Medical Society of the State of North Carolina; modest and reserved in his demeanor and a lover of his profession.

Be it further resolved that our sympathy goes out to his family and his patients, and that a page in our County Society records be ascribed to his memory.

E. H. Alderman, M.D.
President
C. Watson Wharton, M.D.
Secretary

Christopher Sylvanus Barker, M.D.

Dr. Christopher Sylvanus Barker was born October 28, 1885, in Jones County, North Carolina. He graduated from Trenton High School and Rhodes Military Institute in Kinston. He attended the University of North Carolina for three years and received his medical degree from the Jefferson Medical College in 1909. He then interned in the South Bethlehem Hospital in Pennsylvania and returned to Trenton, North Carolina, where he practiced medicine. After seven years of practice there he moved to New Bern in 1917, where he continued the general practice of medicine until his recent retirement.

Dr. Chris served his community well and faithfully from horse and buggy days to our more modern times. He was kind and considerate of his patients and very obliging with his fellow practitioners. Needless to say, he was successful in his practice of medicine and in his community life. He was a member of the Centenary Methodist Church, Craven County Medical Society and an honorary member of North Carolina Medical Society, which awarded him a certificate of membership in the Fifty Year Club. He was also a member of the American Medical Association. He was on the Staff of St. Luke's Hospital and Good Shepherd Hospital in New Bern. He was a member of the Zion Masonic Lodge of Trenton, North Carolina; New Bern Chapter 46, St. John's Commandery 10, the Sudan Shrine Temple, and the Benevolent and Protective Order of Elks. He served as a director of First Federal Savings and Loan Association in New Bern.

Dr. Barker died at his home in New Bern on October 11, 1960, at the age of 74 following an illness of several years. He is survived by his wife, Mrs. Ruth Henderson Barker; two sons, Rear Admiral C. S. Barker, Jr. and Dr. Charles T. Barker, a practicing dentist in New Bern, and a host of friends and former patients who will feel his absence greatly.

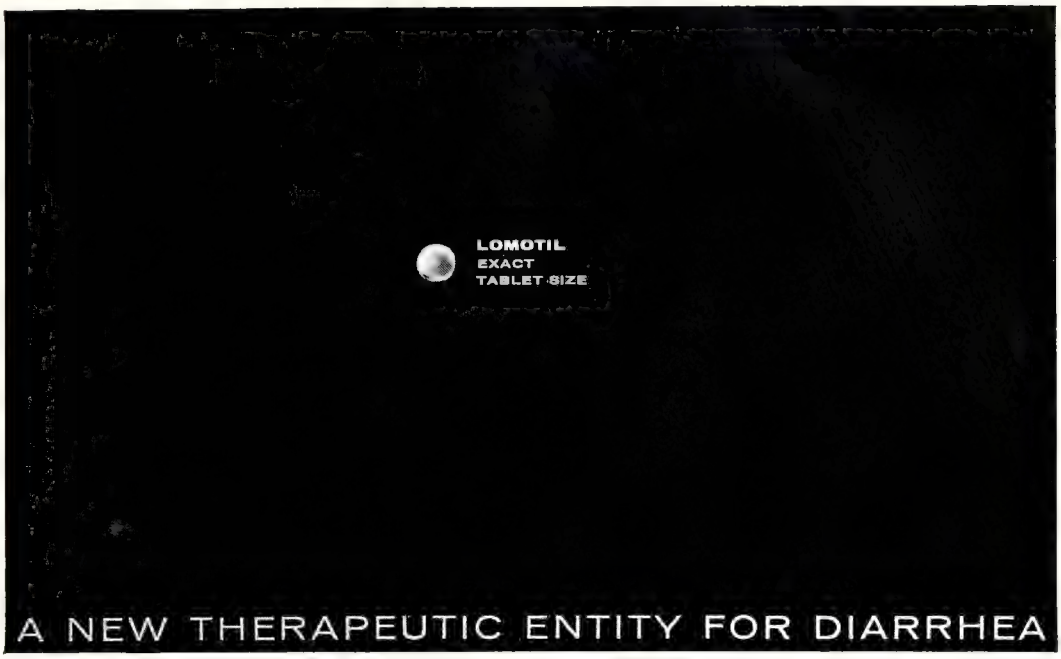
The Month in Washington

Election of Senator John F. Kennedy as President made it probable that the issue of providing health care for the aged under Social Security again will be raised in Congress next year.

Kennedy will go into the White House pledged "to the immediate enactment of a program of medical care for the aged through Social Security." His intentions present a serious challenge to the nation's physicians who have vigorously opposed use of the Social Security system to provide health care for the aged.

Kennedy's program would provide what he described as "a life policy of paid-up

(Continued on page 580)



A NEW THERAPEUTIC ENTITY FOR DIARRHEA

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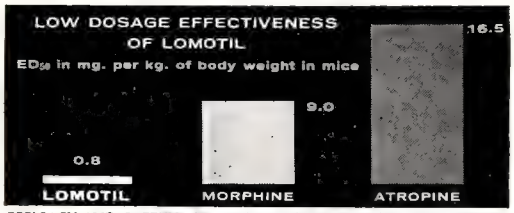
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LOMOTIL represents a major advance over the opium derivatives in controlling the propulsive hypermotility occurring in diarrhea.

Precise quantitative pharmacologic studies demonstrate that Lomotil controls intestinal propulsion in approximately $\frac{1}{11}$ the dosage of morphine and $\frac{1}{20}$ the dosage of atropine and that therapeutic doses of Lomotil produce few or none of the diffuse untoward effects of these agents.

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PRECAUTION: While it is necessary to classify Lomotil as a narcotic, no instance of addiction has been encountered in patients taking therapeutic doses. The abuse liability of Lomotil is comparable with that of codeine. Patients have taken therapeutic doses of Lomotil daily for as long as 300 days without showing withdrawal symptoms, even when challenged with nalorphine.

Recommended dosages should not be exceeded.

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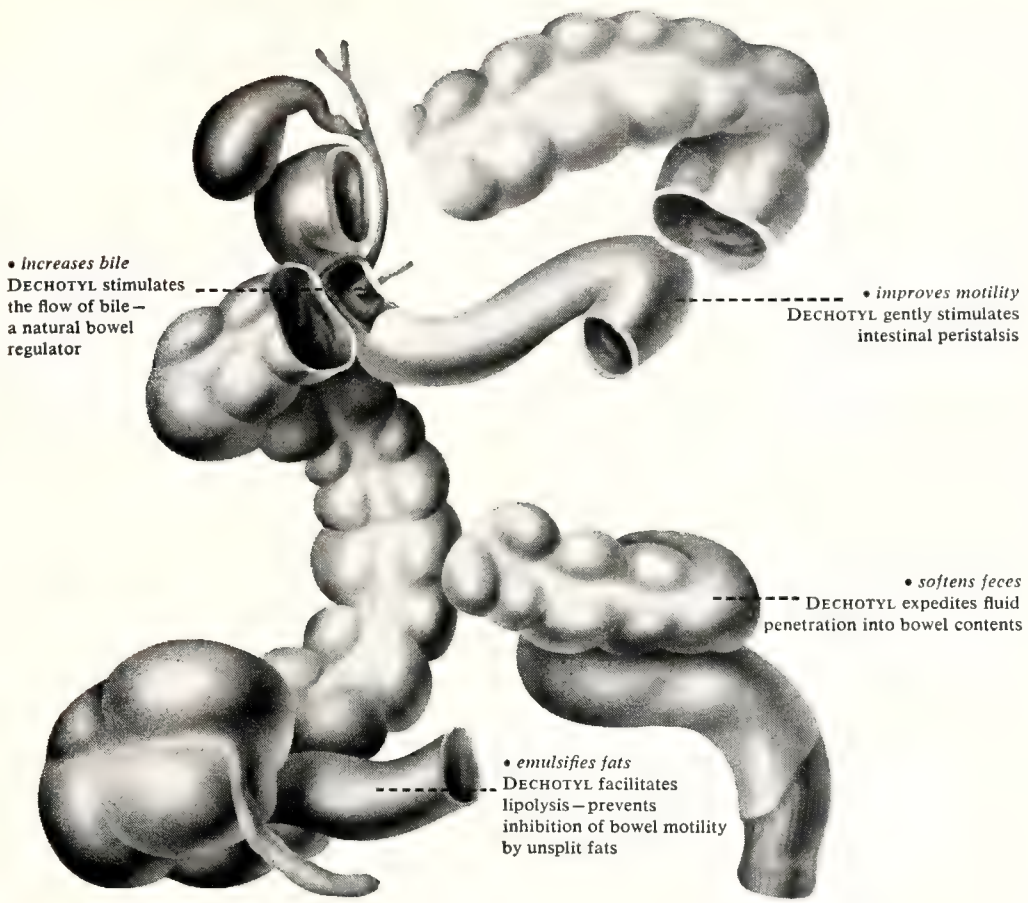
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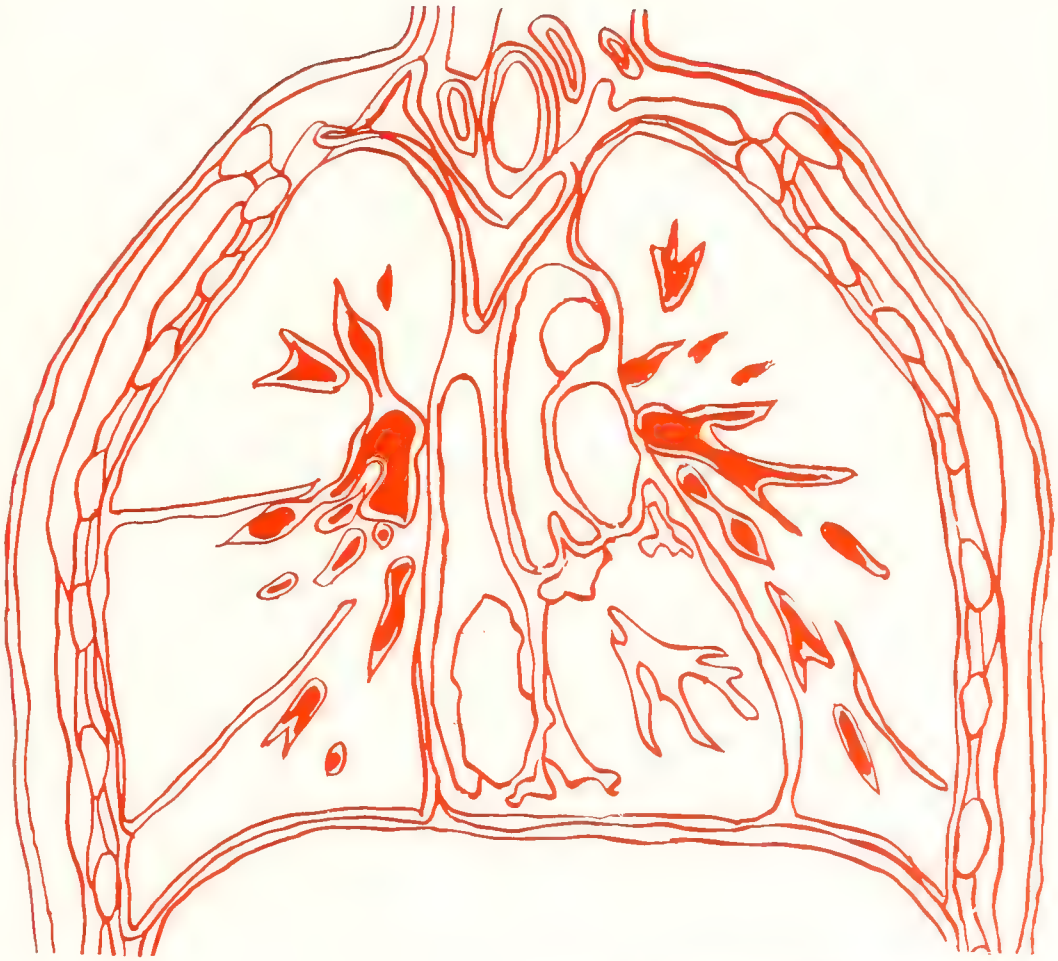
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Wednesday, January 11, 1961
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MONTGOMERY, ALABAMA
Friday, January 13, 1961
The Whitley Hotel

MINNEAPOLIS, MINNESOTA
Monday, January 16, 1961
The Hotel Leamington

LEMONT, ILLINOIS
Wednesday, January 18, 1961
The White Fence Farm

CINCINNATI, OHIO
Sunday, January 22, 1961
The Netherland Hilton Hotel

NEW DORP, STATEN IS., N. Y.
Wednesday, February 15, 1961
The Tavern-on-the-Green

CHARLESTON, SOUTH CAROLINA
Thursday, February 23, 1961
The Francis-Marion Hotel

ANCHORAGE, ALASKA
Saturday, February 25, 1961
The Westward Hotel

BAKERSFIELD, CALIFORNIA
Friday, March 3, 1961
The Bakersfield Hacienda

WILLIAMSBURG, VIRGINIA
Wednesday, March 8, 1961
The Williamsburg Lodge

ALBUQUERQUE, NEW MEXICO
Saturday, March 11, 1961
The Hilton Hotel

OMAHA, NEBRASKA
Thursday, March 16, 1961
The Sheraton-Fontenelle Hotel

PHOENIX, ARIZONA
Saturday, March 18, 1961
The Westward Ho Hotel

LOUISVILLE, KENTUCKY
Thursday, March 23, 1961
The Sheraton-Seelbach Hotel

BAY SHORE, LONG ISLAND, NEW YORK
Wednesday, April 12, 1961
The LaGrange Inn

BUTTE, MONTANA
Saturday, April 22, 1961
The Finlen Hotel

ITHACA, NEW YORK
Thursday, April 27, 1961
The Statler Club

ERIE, PENNSYLVANIA
Wednesday, May 3, 1961
The Hotel Lawrence

SACRAMENTO, CALIFORNIA
Wednesday, May 10, 1961
The El Dorado Hotel

LOS ANGELES, CALIFORNIA
Wednesday, June 7, 1961
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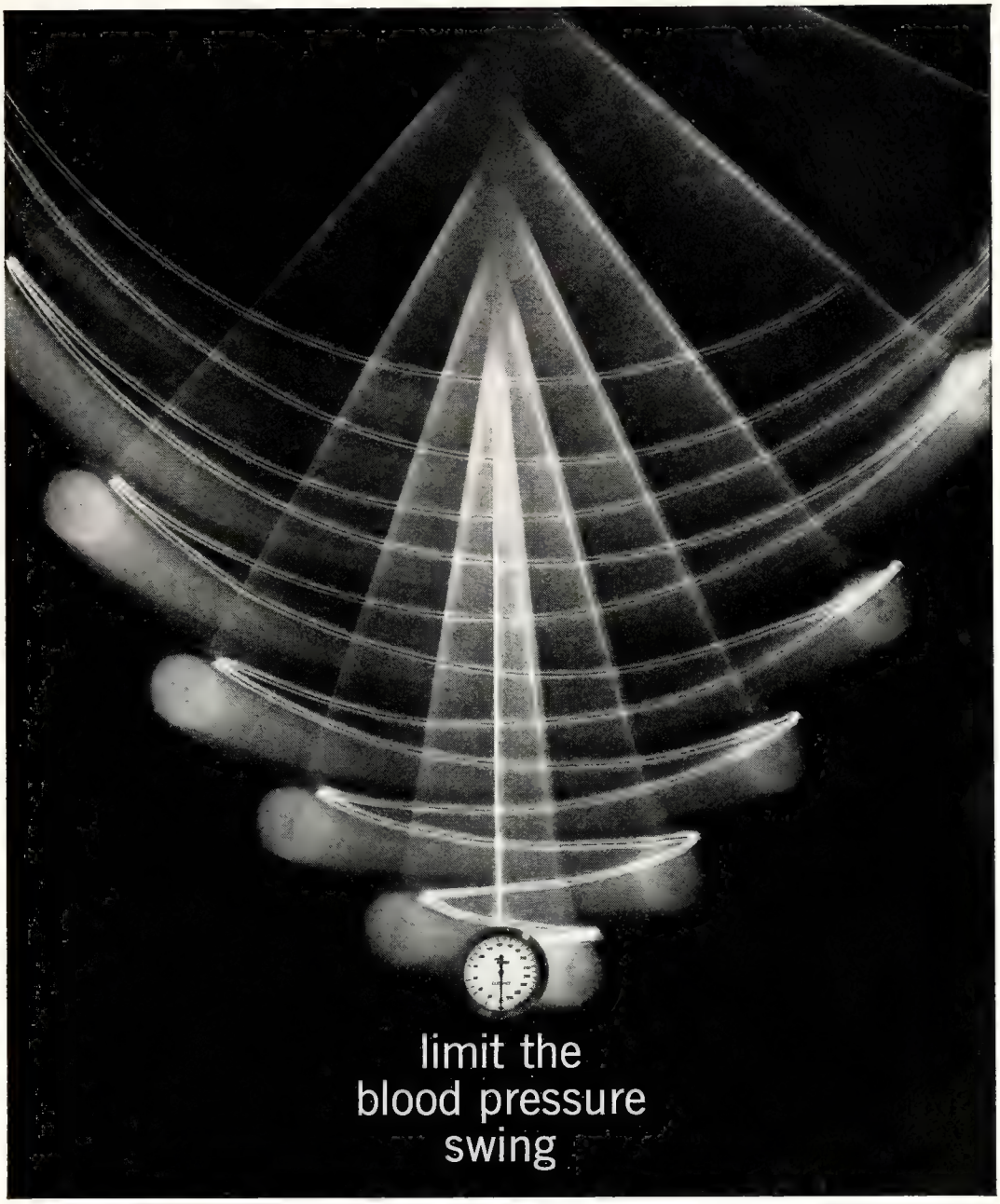
NaClex produces diuresis, weight loss, and symptomatic improvement in edema associated with various conditions. It also has antihypertensive properties and may be used alone in mild hypertension or with other antihypertensive drugs in severer cases.

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Supply: Yellow, scored 50 mg. tablets.

References: 1. Pitts, R. F., Am. J. Med., 24:745, 1958. 2. Ford, R. V., Cur. Therap. Res., 2:51, 1960.

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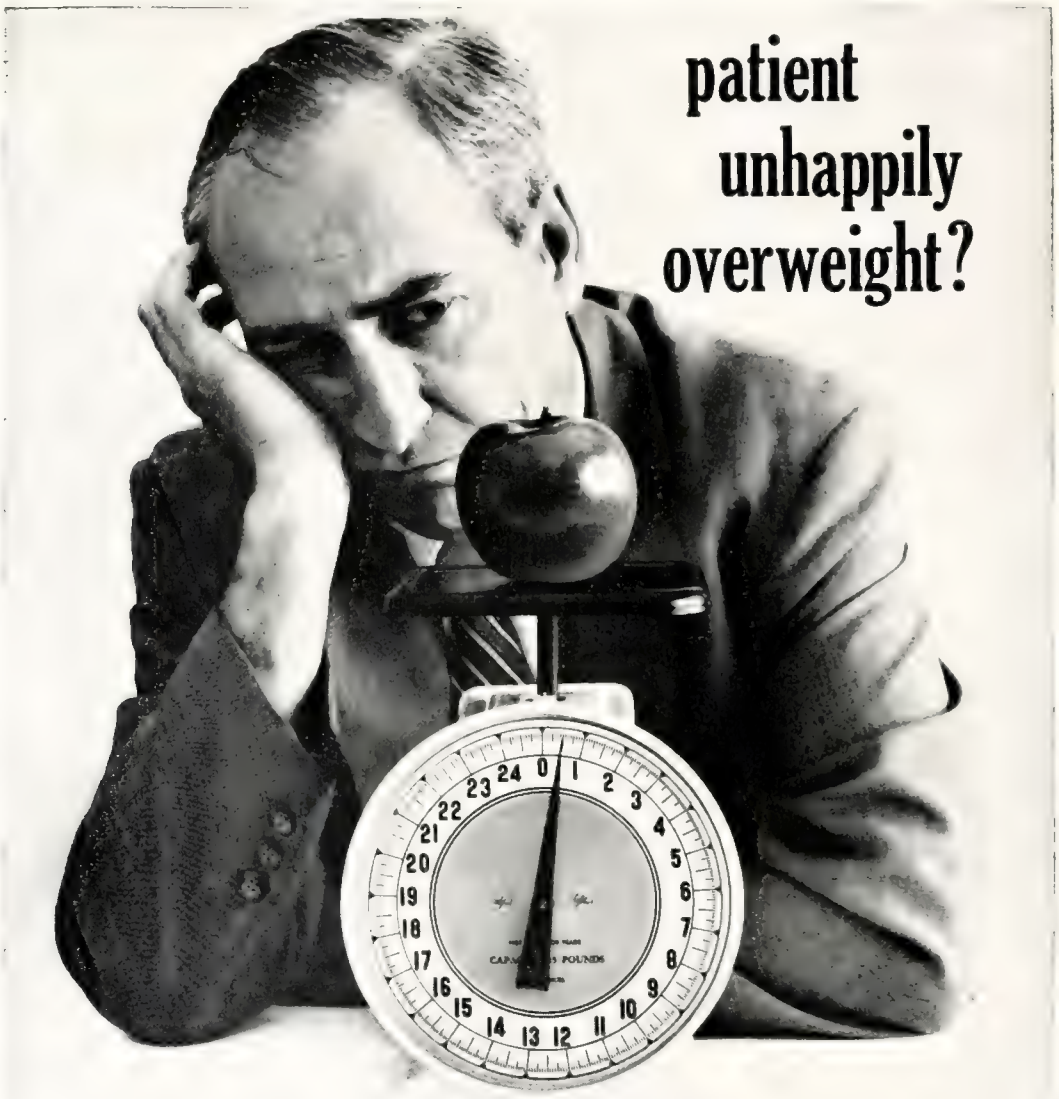
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[1] Douglas, H. S.: West. J. Surg. 59:238 (May) 1951.

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1. Weissberg, G.: Clin. Med., June 1960.

2. Spoor, H. J.: N. Y. St. J. Med., Oct. 15, 1958.

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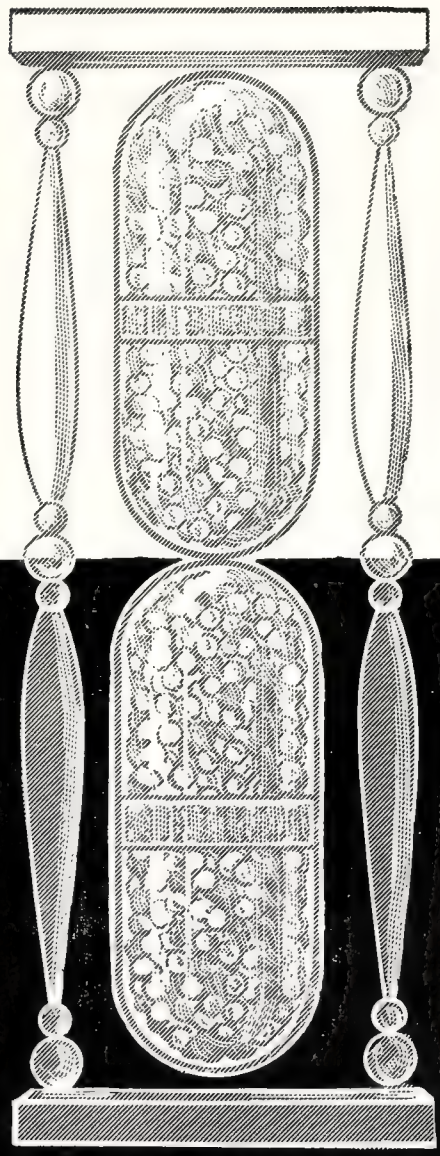
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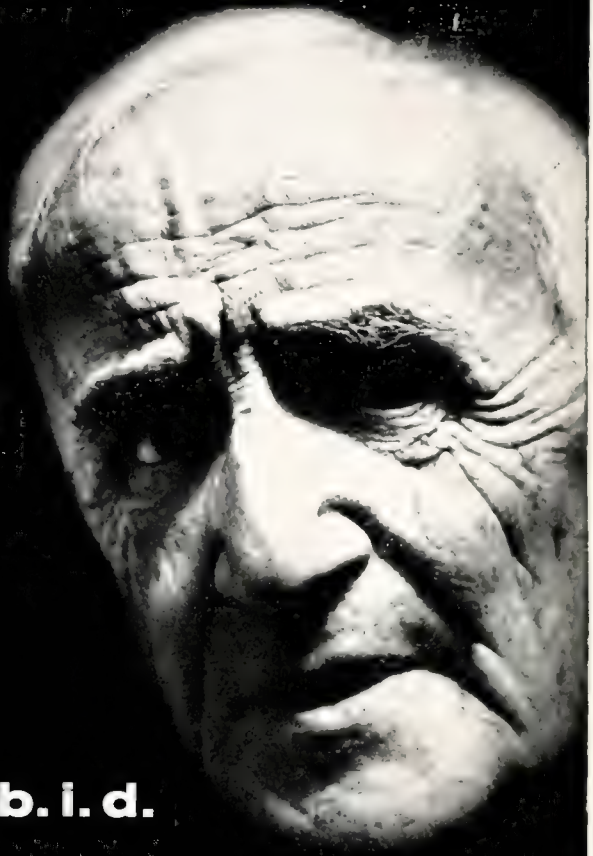
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REFERENCES:

1. Scherbel, A. L.; Schuchter, S. L., and Harrison, J. W.: Cleveland Clin. Quart. 24:98, April, 1957.
2. Waine, Hans: Arthritis, rheumatoid, in Conn, H. F.: Current Therapy 1959, Philadelphia, W. B. Saunders Co., 1959, p. 565.

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References: Drugs, Their Nature, Action and Use; H. Beckman, M.D., 1958; Pg. 502, 504, 505.



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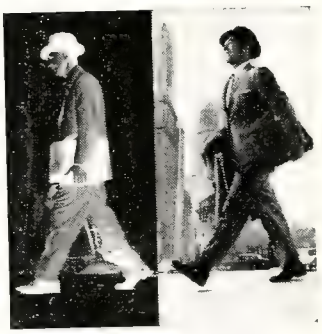
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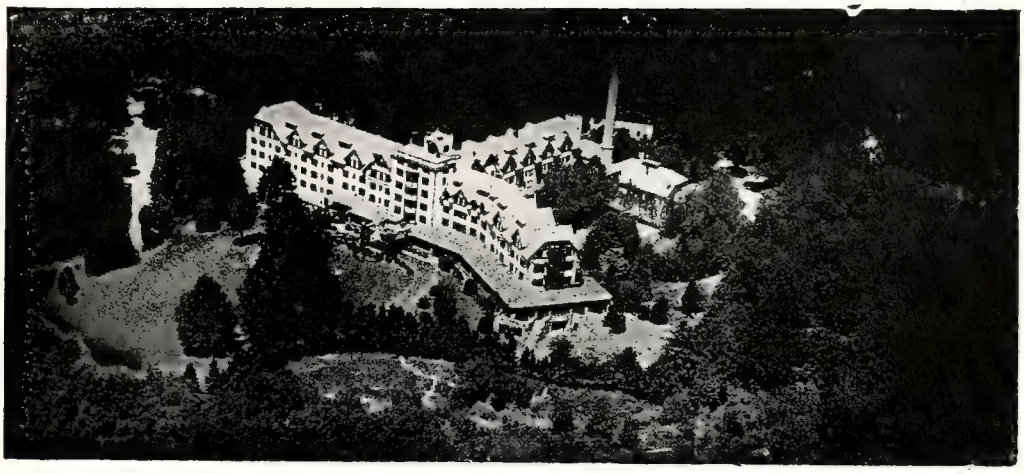
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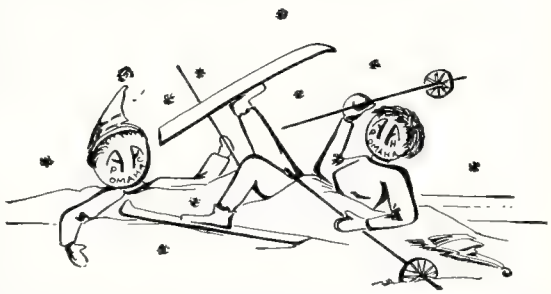
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The Month in Washington

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medical insurance" for older persons. "It would provide them hospital benefits, nursing home benefits, and x-rays and laboratory tests on an outpatient basis," he said in his campaign for the presidency.

He said the Kerr-Mills legislation enacted into law last summer is inadequate. The medical profession supports this federal-state program to provide health care for needy and near-needy aged persons. In approving the Kerr-Mills program, Congress rejected the Social Security approach espoused by Kennedy and union labor leaders.

Kennedy's medical program also included: federal grants for construction, expansion and modernization of medical, dental, and public health schools; federal loans and scholarships for medical students; federal grants for renovating older hospitals; increased federal financial support for medical research, including basic research, and expansion of federal programs for the rehabilitation of handicapped or disabled persons.

* * *

Food and Drug Administration employes have been cleared of conflict-of-interest charges brought up in the Senate Antitrust and Monopoly Subcommittee's investigation of the drug industry.

A three-member investigating group appointed by Arthur S. Flemming, Secretary of Health, Education and Welfare, examined the financial records of 900 FDA employes. The special investigators then reported:

"On the basis of all the evidence before us, it is our judgment that there are no present employes of the FDA whose sources of personal income are incompatible with their government employment."

The investigators continued to analyze "a mass of fact and opinion" in connection with charges that there has been too close a relationship between some FDA employes and drug companies which they check for conformance to goverment regulations.

The investigators anticipated that their final report would show the possibility of organization or procedural improvements in the FDA.

The charges were triggered by disclosure at the Subcommittee investigation that Dr. Henry A. Welch, Director of the FDA's Antibiotics Division, had received $287,000 over eight years as a writer and editor for antibiotics publications. After the disclosure, Flemming ousted Welch from the government post.

* * *

The Federal Children's Bureau reported that the infant death rate in the United States has declined since 1958 but still shows the effect of a 1957-'58 setback.

There was a steady decline in U. S. infant deaths during the 1950's but increases in 1957 and 1958. Since then, the infant death rate has headed downward again but still hasn't made up the lost ground, even though the provisional rates for 1959 (26.4 deaths under one year per 1,000 live births) and the first half of 1960 (25.9 per 1,000) showed improvements.

In 1915, when data were first gathered on infant mortality in this country, the rate was 99.9 per 1,000. By 1940, this had been cut to 47 and by 1950, it had been reduced to 29.2.

An all-time low of 26 was registered in 1956. It edged up to 26.3 in 1957 and 27.1 in 1958.

According to the 1959 United Nations Demographic Yearbook, nine other countries reported lower infant mortality rates than the United States in 1958. They were: Sweden 15.8, Netherlands 17.2, Australia 20.5, Norway 20.5, Switzerland 22.2, United Kingdom 23.3, Denmark 23.4, New Zealand 23.4 and Finland 24.5.

Russia reported a rate of 81 in 1950 and 40.6 in 1957, latest year for which data were reported.

* * *

Persons with heart and blood vessel diseases have been urged to consult their physicians about routine vaccination against influenza.

In a joint statement, the American Heart Association and the National Heart Institute of the U. S. Public Health Service said that "evidence of the past three years abundantly confirmed that dangers of influenza are much greater for patients with heart or lung disease than for others." The risk was described as "particularly high for those with lung congestion due to heart disease."